REPORT RESUMES

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ATTITUDE CHANGE AND LEARNING AS A FUNCTION OF PRESTIGE OF INSTRUCTOR AND MODE OF PRESENTATION. TWO EXPERIMENTAL STUDIES IN INSTRUCTIONAL TELEVISION.

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TWO STUDIES IN CLOSED-CIRCUIT INSTRUCTIONAL TV WERE PERFORMED AT MICHIGAN STATE UNIVERSITY. CLASSES SUBJECTED TO THE STUDY WERE SOCIAL SCIENCE AND ADVERTISING. THE OBJECTIVE WAS TO MEASURE COURSE RELATED STUDENT ATTITUDES. THE SOCIAL SCIENCE PROJECT WAS CONDUCTED OVER 3 DAYS. STUDENTS WERE DIVIDED INTO 18 EXPERIMENTAL GROUPS, SOME RECEIVING LIVE AND SOME TELEVISED INSTRUCTION, AND 2 CONTROL GROUPS. THE INSTRUCTOR GIVING THE TELEVISED LECTURE WAS PRESENTED TO THE STUDENTS AS HAVING LOW, NEUTRAL, OR HIGH PRESTIGE. ATTITUDES TOWARDS INSTRUCTIONAL TV, THE INSTRUCTOR AND CONCEPTS FROM THE LECTURE WERE MEASURED ON A SEMANTIC DIFFERENTIAL SCALE. LEARNING WAS MEASURED AFTER THE LECTURE AND AGAIN AFTER 8 WEEKS. THE ADVERTISING PROJECT WAS A LONGER ANALYSIS OF VARIANCE OF A LIVE CLASS, A STUDIO CLASS, AND A TV CLASS. ONE INSTRUCTOR TAUGHT ALL THE CLASSES. ATTITUDES WERE MEASURED BY SEMANTIC DIFFERENTIAL, LEARNING BY REGULAR ASSIGNMENTS AND EXAMINATIONS. THE MOST SIGNIFICANT FINDINGS OF BOTH PROJECTS RELATED TO STUDENT LEARNING. STUDENTS RECEIVING TELEVISED INSTRUCTION DID POORLY COMPARED WITH THOSE CONVENTIONALLY TAUGHT. INSTRUCTOR PRESTIGE, PRIOR EXPOSURE TO INSTRUCTIONAL TV, AND STUDENT ABILITY DID NOT INTERRELATE SIGNIFICANTLY. PREVIOUS STUDIES IN EDUCATIONAL TV ARE REVIEWED. (MS)

III

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Attitude Change and Learning

As a Function of Mode of Presentation and Prestige of Instructor

Two Experiments
in
Instructional Television

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Communications Research Center
Michigan State University

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ATTITUDE CHANGE AND LEARNING AS A FUNCTION OF PRESTIGE OF INSTRUCTOR AND MODE OF PRESENTATION

Two Experimental Studies in Instructional Television

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I. INTRODUCTION

This report gives the results of two studies in instructional closed-circuit television. The first study involves part of a basic course in social science at the college level. In this study, hereafter referred to as the Social Science Project, a one-time presentation is used as the message. The main independent variables are mode of presentation (television and face-to-face) and prestige of instructor (national expert, departmental expert and ordinary instructor). The main dependent variables are attitude change toward subject matter content, attitude change toward teaching by television, and information gain. Short term (six weeks) retention of attitude change and information gain and the possibility of a novelty effect are explored also.

The second study involves a term long course in advertising. The main emphasis in this study, to be referred to as the Advertising Project, is on information gain with a secondary interest in attitude change toward the concept of advertising. The interesting feature of this course is its dependence on a large amount of visual material to illustrate teaching points.

Both studies were done at Michigan State University. The subjects were students regularly enrolled in the classes under study. The use of courses already being taught at the University limited the amount of experimental manipulation, however, it served the advantage of having subjects perform in a normal university classroom situation rather than in a laboratory experiment atmosphere.

The Social Science Project was conducted during the final or spring term of 1957. The Advertising Project was carried out during the first or fall term of 1957-1958. A follow-up study of the Advertising Project (to be reported as a separate study) was planned for the winter or second term of 1957-1958.

A. Background of the Problem

Television has been used by educational institutions for about ten years. These uses have ranged from the public relations program, where the school system seeks better understanding from the community about educational problems and procedures, to total teaching efforts, where a television teacher is substituted for several classroom teachers.

Today, at least 60 school systems and over 70 institutions of higher learning are undertaking some form of teaching by television. At the college level, over 400 courses, ranging in subject matter to almost every undergraduate course, have been given over television for regular college credit (17).

Proponents of television have been quite vocal in pushing the use of television as a total or partial solution to pressing educational problems. The Stoddard report (24) and the recent Siepmann book (21) are two documents which strongly urge the use of television. Those proponents of television usage are usually careful to point out that television "is a means and not a way to education." They bank heavily on research studies to support the view that teaching by television is not deleterious upon the educational development of the student.

What does this research say? In 1956, a small booklet was published which attempted to bring together all of the research done on instructional television (16). At that time, the major findings seemed to be these:

1. On subject matter tests, television students did just as well as conventionally taught students and at times did somewhat better.

2. On short term retention tests on subject matter content, television students did just as well as conventionally taught students.

3. Acceptance of television by students varied.

4. Increasing the size of classes, having proctors in the television room, providing for talk-back facilities did not have any significant effect on amount learned for television students.

5. It was uncertain whether a novelty effect existed or not.

6. Very little work had been done on change of attitudes toward subject matter content through presentation by television.

Later studies have not altered the above conclusions radically. Increasingly, the trend is toward investigation of detailed aspects of instructional television. The general question of whether students learn as well by television compared with the normal classroom situation has been broken down into a number of specifics, e.g. do high or low ability students learn better by TV than by face-to-face, does size of class have an effect? Perhaps the most meticulous series of studies have been conducted at Pennsylvania State University (5) where a number of experiments have been undertaken since 1955. The military (14) (20) has also been active in experimenting with television although the number of studies appearing recently have decreased from this source.

The concern with whether the mode of instruction has an effect on learning or information gain perhaps has depressed interest in other aspects of teaching by television. It is not surprising that almost all of the studies have had effect on learning as the primary dependent variable. In a great many cases, the research has come about as the result of inquiries from administrators and policy makers whose main concern, naturally, has been with learning of subject matter content.

1. Attitude change through TV teaching.

In the area of attitudes, most studies have included some measure of acceptance of teaching by television. Allen (1) for example found that a majority of the students who received ROTC Quartermaster instruction thought the material presented was about as easy to learn via TV as through regular classroom instruction. Evans (7) found that 70% of the students in a TV psychology class stated a willingness to enroll in another TV class. However, the pattern is not one of solid approval for TV teaching. In a series of four exploratory studies at Purdue University (6), three of the four classes expressed disapproval of the mode of instruction.

There are very few studies which deal with learning of or change in course-related attitudes. This is a serious deficiency if one accepts that an important component of education is the acquisition of mental sets, the restructuring of frames of reference. On the other hand, the difficulty of measuring such changes, of constructing adequate measuring instruments, sometimes prohibits the inclusion of this component of learning in television studies, especially if some other specific research has been requested of the researcher.

Course-related attitudes were studied by Carpenter and Greenhill (5). In a general psychology course, they found that both conventionally taught and television taught students scored significantly lower on the F scale (less authoritarianism) at the end of the course compared with the beginning of the course. There was no significant difference, however, between the TV and conventional groups. In a course on psychology of marriage, marriage happiness prediction inventories filled out by students were compared for TV and non-TV groups. Results were inconclusive. Belson (3), in a four program series on France broadcast over BBC, found that viewers learned new French words and phrases and picked up general information about France as a result of viewing part or all of the series. However, he found that apprehensions about taking a trip to France had increased, contrary to the intent of the program.

2. The novelty effect.

In all of the studies to date, a question can be raised as to the existence of a "Hawthorne" or novelty effect. The newness of the TV experience, one could argue, produces attentional effects not present in situations to which the students are accustomed. Hence, the phenomena of TV students doing as well as normal classroom students might be misleading since TV student scores would be the result of higher attention caused by the uniqueness of the situation. One difficulty in answering the above argument is the fact that long range studies using television have not yet appeared.[1] One has to have students who have become accustomed to TV instruction as a normal routine to adequately check out the existence of a novelty effect.

A few studies throw some light on this problem. Jackson (13) found that announcing a film as a kinescope (recording of a telecast), produced significantly better learning scores than when a film was announced as a training film. This study was done in 1951, when television was fairly new. In 1955, Hurst (12) repeated the experiment and found that there was no significant difference in learning scores whether the film was announced as a kinescope or a training film. One of the possible explanations is that by 1955, these students were used to television. In a number of semester-long or quarter-long experiments, such as conducted at Penn State (5), there has been no altering of the pattern of student achievement between tests given at the beginning of the course (where ostensibly the TV experience is very new) and tests given during the end of the course (where students are more accustomed to TV). Nor has there been any case of significant differences appearing between conventional and TV groups as the course progressed.

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[1] Since this study was done, Miami University has experimented with students exposed a year to instructional TV.

These are very indirect clues to the problem of novelty, if indeed a novelty problem exists. As TV is used more and more for instructional purposes, previously exposed students can be tested against initial TV experience students. At the present time, TV instruction has not been concentrated in any subject matter area to the extent that a substantial number of students who have had previous exposure would be available for study.

3. Ability levels and TV instruction.

In a study with Army basic trainees, Kanner, Runyon and Desiderato (14) matched high and low students in TV and conventional classes. They found that low ability students taught via TV did significantly better on information gain tests than their counterparts taught by conventional methods. No significant difference between TV and non-TV was found for high ability students. Boone (4) using Naval Academy students also found that "poorer" men determined by pretests did better by TV instruction than by normal instruction.

Fritz, Humphrey, Greenlee and Madison (8) found no such relationship. No significant differences were found between paired ability level students exposed either to TV or conventional instruction. In the three studies cited above, all subjects were members of the military. A further check on the contradictory findings using other types of students seems in order.

4. Prestige and instructional TV.

In a great many attitude change studies, it has been found that the prestige, or more accurately, the perceived prestige of the source significantly affects the amount of attitude change. Typical of findings with respect to prestige, trustworthiness or expertness of the source are the studies by Kulp (14) and Moos and Koslin (18). They found that the higher the perceived prestige of the communicator, the greater the attitude change toward the position advocated in the message.

These findings hold true when the communicator is face-to-face with his audience or when the message is presented by tape recording. It seems plausible that the same thing will hold true for television. There is, however, another factor to be considered, namely, the prestige bestowed upon the communicator simply because he is being telecast. No studies have investigated the effect of varying prestige on attitude change using television as the medium.

There have been no studies, also, in which comparisons have been made of different media with relation to heightening or depressing the prestige effect. In a classroom situation, we can assume that a certain amount of prestige attaches to the instructor. The question which can be raised is whether putting the instructor on television to teach his classes adds to his prestige.

It has been fairly clear, however, that although there is differential attitude change as a function of prestige, there is no effect on information gain. Thus the higher prestige classroom teacher should be more successful in changing course-related attitudes than an instructor with lower prestige but he should not be any more successful than the lower prestige instructor in conveying informational content of the course (10) (11).

5. Subject matter most amenable to TV treatment.

There is very little evidence to support any one subject matter area as better for TV than other areas. Kanner, Runyon and Desiderato (14) analyzed items used in their information tests into types of questions. They concluded that TV was superior for teaching interrelationships among small parts, teaching paired-associate or rote learning, giving recognition training. Others (2) (23) have interviewed classroom teachers for their opinions. The responses seem to indicate that these teachers think subject matter which utilizes demonstrations is best for TV.

In the second part of this study, the subject matter is advertising. No TV experiments using this subject matter area have been done. Moreover, the advertising course used a lot of visual aids to illustrate teaching points. While this may not fall neatly in the category of demonstrations, it has a common property with demonstrations -- a dependence on visual materials.

B. Statement of the Problem

In light of the findings from other studies cited above, we can conclude that a great many gaps exist in our knowledge of the use of television for instructional purposes. While we cannot expect to fill all these gaps in time to help harried administrators make decisions concerning television, we can make some start by concentrating on those areas which seem to be in the most need of research.

The area of course-related attitudes is one of these. As Hovland once stated,

> "On the problems of how to transmit factual information...the work of the last twenty years has been very enlightening. But even more significant problems exist in the field of communication of values and attitudes. Here

we are largely in unknown territory, with a strong realization on the part of educators of the magnitude of the problem and its importance but with little dependable information at hand." (9)

In the Social Science Project, the dependent variable of attitudes was split into three components. One was attitude toward the instructor, the second was attitude toward receiving instruction by television and the third was acceptance of values and attitudes presented in the subject matter.

For these three components, the following independent variables were introduced: mode of instruction, perceived expertness of the instructor, ability level of students and amount of prior television instruction. Since three instructors were utilized, the different instructors themselves may be considered as independent variables.

The following questions were posed with respect to mode of instruction:

1. What is the effect of the medium used on attitudes toward the instructor of the course?
2. What is the effect of the medium used on acceptance of values and attitudes presented in the subject matter?
3. What is the effect of the medium used on acceptance of teaching by television?

These questions were asked with respect to perceived expertness:

4. What is the effect of perceived expertness of the instructor on attitudes toward the instructor?
5. What is the effect of perceived expertness of the instructor on acceptance of values and attitudes presented in the subject matter?
6. What is the effect of perceived expertness of the instructor on acceptance of teaching by television?

The experimental design also permitted the exploration of the following question:

7. Is there inter-action among the independent variables of medium, perceived expertness and instructors?

The following questions were asked with regard to ability level and prior instructional television exposure:

8. What is the effect of differing ability levels on attitudes toward source, concepts within the message and acceptance of TV teaching?

9. What is the effect of prior television exposure on attitudes toward source, concepts within the message and acceptance of TV teaching?

It was also decided that a retention test would be used. A commonly occurring phenomena in attitude change studies is that there is regression to prior positions after the passage of time. It has been noted, however, that a "sleeper" effect sometimes operates when one varies prestige (10). That is, there is "normal" regression in attitude position for those exposed to high prestige sources but a shift in attitude in the desired direction for those exposed to low prestige sources. Thus, with the addition of a retention test, the following question can be asked:

10. What is the effect of perceived expertness of the instructor on attitudes toward source, concepts within the message and acceptance of TV teaching some time after original exposure?

Information gain was also tested in the Social Science Project. The same independent variables used for testing effects on attitudes were used for testing information gain. In question form, these can be stated as follows:

11. What is the effect of the medium used on information gain?

12. What is the effect of perceived expertness of the instructor on information gain?

13. What is the effect of differing ability levels on information gain as a function of different media?

14. What is the effect of prior television exposure on information gain?

In the Advertising Project, the primary emphasis was on information gain. This project followed the Social Science Project and the focus on information gain came about as the result of findings in the Social Science study. In addition, the Advertising Project was a term long course in which specific aspects of the course could be tested and compared.

The following questions were asked in the Advertising Project:

1. What is the effect of mode of instruction on information gain in a course with heavy emphasis on visual materials?
2. What is the effect of mode of instruction on attitudes toward the concept of advertising?
3. What is the effect of mode of instruction on attitudes toward considering advertising as a career?

II. DESIGN AND PROCEDURE

A. The Social Science Project

The Social Science course in the Basic College at Michigan State University is a year-long sequence. All undergraduates at the University are required to take the sequence or pass special examinations to waive part or all of the sequence. Normally, the Social Science sequence is taken during the sophomore year although there is a sprinkling of juniors and even seniors.

Although the course is a general orientation to the field of the social sciences, the three quarters of the course have differing emphases. The fall or first quarter is concentrated on sociology and social psychology. The second quarter concentrates on economics and the third quarter emphasizes political science. This study was carried out in the third quarter.

Section sizes vary but generally there are about 40 students to a section. Thirty to 40 instructors teach these sections with the number of sections each quarter running to almost 100. In the quarter this study was done, over 60 of these sections were engaged in the political science course of the sequence.

Students do not know which instructor they will be getting when they register. Thus, in a sense, instructors are randomized among classes. One of the factors which might produce differing class composition is the time of day when courses are given. It is possible, for example, that students of a particular ability level might concentrate in the morning periods.

At the time of this study, the Social Science Department had been experimenting for the previous two quarters with teaching some of their sections over closed-circuit television. A pool of some 200 or so students who had

had a prior course in Social Science by television was available for the study.

1. Description of TV facilities.

The closed-circuit facilities at Michigan State University are located in Giltner Hall, the Veterinary Medicine building. Industrial type vidicon cameras are used. Two receiving rooms, each seating about 100 students, are used with two 24" monitors in each room. The originating room is a lecture amphitheater seating 400 students. Two cameras, one fixed and the other mobile, are available. The control room is located beneath the originating room with a film chain available if needed.

The originating room has not been radically altered for television. The only changes this lecture hall has undergone are the addition of a bank of lights, a monitor for use of the instructor and two monitors placed at each side of the lecture space for use by viewers in the originating room.

A permanent engineer is assigned to the closed-circuit facilities. The The rest of the crew including directors are advanced students majoring in radio-television at the University. At times, the director may be a full time staff member of WKAR-TV the University open broadcast TV station. For the Social Science Project, a WKAR-TV staff member was used as director. In the Advertising Project, a student director was used.

2. General methodology.

It was decided that the Social Science Project would be a one-time operation. This one-period class would have to come very early in the quarter, before students became familiar with the instructors. This was necessary to insure that the announced prestige of the instructor would have maximum effect. An after-only design was used with a control group with no experimental treatment for comparison purposes. Testing took place immediately after exposure and again about eight weeks later.

The general design of the experiment was a three-way analysis of variance. One dimension was mode of teaching, television versus no-television. The second dimension was perceived prestige, ordinary instructor, departmental expert and national expert. The third dimension was instructors, in this case three different persons from the Social Science Department staff.

Each cell of this 2 x 3 x 3 cube had one of the sections of the course. Thus, 18 classes were used for experimental treatment. Two other sections of the course were used as control classes. No section received more than one treatment.

A constant message was used for all treatments. The lecture was written by members of the Social Science Department. Experimental instructors were rehearsed so that variation in message content would be minimized. Textbook reading on the lecture was controlled by not assigning any readings nor giving any advance notice of the subject matter to be taken up. Instructors in sections other than the experimental ones were asked not to take up the subject matter of the experiment until after the sessions had been run off.

In preparation for the experiment, several meetings were held with members of the Social Science Department. After initial approval from members of the TV committee of the Department, the experimenter and members of the Communication Research Center met with the entire faculty of the Department and explained the purposes of the experiment. From the Department, the Center secured the services of a coordinator to arrange the necessary classes for the experiment. In addition, volunteer instructors were selected to serve as lecturers in the experiment and to help write the experimental message.

Arrangements were made with the radio-television department and WKAR-TV to get the necessary technical help. It was first decided that TV receivers would be placed in the ordinary classrooms so that students would not have to shift for the experimental session to the closed-circuit facilities. The costs of open-circuit broadcast--installation of an antenna, renting of receivers--led to the abandonment of the scheme. Such a procedure would have allowed the experiment to be run off in one day thus reducing the risk of leaking knowledge of the experiment to other students. It also would have meant that students would be exposed in the classroom to which they were assigned for the quarter.

Use of closed-circuit meant that classes would have to be shifted for the experiment. Since only two viewing rooms were available and the facilities were being used by other classes at the University, the experiment had to be run over the course of several days. The experiment started on the first Friday of the quarter (classes started on Wednesday) and continued through the following Tuesday. Because of technical difficulties in one of the TV sessions, a replacement class was run on Wednesday.

3. The experimental message.

Part of the regular subject matter of the course was picked as the subject of the experimental message. Although it may have been desirable to construct a message to suit particular experimental purposes (such as the inclusion of sufficient material for attitude testing), part of the regular course was picked for two reasons--(1) an attempt to minimize disruption of the regular course and (2) an attempt to minimize the awareness on the part of the students that this was an experiment.

The particular topic picked after consultation with the Department was that of Power Politics. This topic came in the second week of the course. Since the experiment was run the first week, it was thought that using this topic would not seriously disrupt the progress of the course and at the same time would serve as a new and as yet unassigned subject for the students.

One of the volunteer instructors wrote a trial script. The restriction was that the lecture be limited to 30 minutes. The remaining 20 minutes of the hour was needed for immediate testing. This trial script was passed around to the other two volunteer instructors involved for comment and emendation. The Center staff also went over the script carefully with the Department coordinator.

The script was pretested with classes in another department of the Basic College and further revision was undertaken. The final version of the script is given as Appendix A. Experimental instructors rehearsed the script, once before a pretest class and once on camera. It was thought that practice effect would be minimized in this way during the actual experiment.

The topic of Power Politics included the following points. (1) The neutrality of the term power politics, implying neither good nor bad. (2) A definition of the term. (3) The distinction between political power and other forms of social power. (4) The distinction between power and authority. (5) An analysis of political power structures. (6) The characteristics of various power structures such as the oligarchical, the caste, and the democratic.

The purposes of the lecture in terms of attitude were: (1) to move students from viewing power politics as something bad to a position of seeing the reality of power politics, and (2) to make them cognizant of factors involved in various power relations; to take a more objective view of power pyramids around the world. The consensus of the Departmental members was that students in the past invariably associated the term power politics with graft and corruption and that they tended to react to the terms caste, oligarchy and democracy in stereotyped ways. The information items to be gained from the lecture were the attributes of various power pyramids and their development, the factors involved in power politics.

4. Test materials.

The attitude test was designed to cover three things--(1) attitude toward teaching by television, (2) attitude toward the instructor, and (3) attitudes toward particular ideas presented in the message. It was decided that the Semantic Differential, developed by Osgood and associates (19), would be a suitable measuring instrument.

The Semantic Differential is an instrument utilizing a combination of scaling and association techniques. The attitude object, or concept, is judged on a series of adjectival bipolar scales. Each of these adjectival pairs of opposites are separated by seven step scales. The subject checks direction and intensity of association of the concept being judged on each of the adjectival scales.

The scales are presented in the following fashion:

hot___:___:___:___:___:___:___cold

The middle space is the neutral or zero point. The spaces just adjacent are defined as _slightly_ hot or _slightly_ cold. The next spaces toward the ends are defined as _quite_ hot or _quite_ cold. The extreme spaces are defined as _very_ hot or _very_ cold.

In previous work with the Semantic Differential, investigators found that three basic dimensions seemed to underly the use of adjectival scales in describing concepts. These dimensions were labelled evaluation, activity and potency. In other words, factor analysis of interscale correlations produced clustering of scales in three major dimensions. These recurred time and again in separate studies using different concepts. The evaluation dimension is composed of scales which might be described as attitudinal--good-bad, kind-cruel, honest-dishonest, etc. The activity dimension is typified by such scales as active-passive, fast-slow. The potency factor is typified by scales strong-weak, masculine-feminine. Reliability of the instrument has been reported in the high .80s. It seems to be a sensitive measuring instrument and has been used quite successfully in attitude change studies.

For this study, it was decided that scales highly loaded on the evaluative factor would be used as a measure of attitude. Scales from the activity and potency dimension were used also to explore the kinds of changes in these factors. In addition, scales which were thought to be especially appropriate but not found on the list of scales developed by Osgood were included. The decision was made that all evaluative scales would be summed for analysis. The same procedure was used for activity and potency scales. Those scales added for which factor loadings were not known were analyzed separately.

Concepts were chosen after consultation with the Social Science Department. More scales and concepts than could be used in the experiment were made up for pretest purposes. The instrument thus constructed was pretested three times along with the information gain test. Once the pretest consisted of students not subjected to the experimental message. Twice the pretests were given to students who also received the lecture to be used in the course.

The information gain test to measure learning was constructed at the same time as the attitude test. Members of the Social Science Department were again consulted in constructing items. About 30 items were constructed and passed around for criticism. Then these items were pretested three times along with the attitude items. Again, once the pretest consisted of students who did not receive the lecture and twice the pretests used students who received the experimental lecture.

The final form of the testing instrmment is given as Appendix B. The concepts used to measure attitude were: TEACHING OVER TELEVISION, FACE-TO-FACE TEACHING, CASTE POWER PYRAMID, AUTHORITY, POWER POLITICS, OLIGARCHICAL POWER PYRAMID, DEMOCRATIC POWER PYRAMID. In addition some of the classes rated their attitude toward the instructor who had given them the lecture.

With respect to the concepts TEACHING OVER TELEVISION and FACE-TO-FACE TEACHING, it was felt that those who received TV instruction should be more favorable toward TV teaching than those who did not, but that those who did not receive TV instruction should be more favorable to the concept FACE-TO-FACE TEACHING than those who received the lesson over TV. The control group should be close to the non-TV group in these comparisons since they did not receive TV either. We were also curious to find out whether prior instructional TV exposure would make attitudes more favorable to TV instruction in comparison with those who were receiving such instruction for the first time.

The same set of scales were used with the above two concepts. These were: good-bad, fair-unfair, pleasant-unpleasant, valuable-worthless (these four scales were summed to get an evaluative dimension score); active-passive, fast-slow (these two scales were summed to get an activity dimension score); strong-weak, large-small (these two scales were summed to get a potency dimension score); interesting-dull, clear-hazy (each of these scales was analyzed separately).

For the concepts AUTHORITY, POWER POLITICS, CASTE POWER PYRAMID, OLIGARCHICAL POWER PRYAMID and DEMOCRATIC POWER PYRAMID, it was felt that in comparison with the control groups, both TV and non-TV groups should move to a more neutral position with respect to each of the concepts. On the pretests it was noted that extreme reactions to each of the concepts was the rule. The gist of the lecture was that each of these concepts were useful in describing certain types of political arrangements but that the question of good or bad was not necessarily implied.

For the above concepts, the same set of scales were used. These were: Evaluative dimension--good-bad, kind-cruel, fair-unfair, pleasant-unpleasant, valuable-worthless; activity dimension--active-passive, fast-slow; and potency dimension--strong-weak, large-small.

For rating of the instructor of the session, the same scales used for rating the concepts TEACHING BY TELEVISION and FACE-TO-FACE TEACHING were used. The exception was the replacement of the scale valuable-worthless by the scale expert-inexpert. This latter scale was analyzed separately and used as a check on the effectiveness of announced expertness of the instructor.

Thirty items were constructed for the learning test. These were pretested three times and item analyzed. The final version of the learning test consisted of 15 multiple choice items. These are presented in Appendix B. It was felt, as the result of the pretests and item analyses, that the 15 item test, although short, was a good test of learning with adequate discriminating items.

In all, the test form consisted of seven concepts each rated on nine or 10 scales, a 15 item multiple choice information gain test, and a page of questions pertinent for identification, accuracy of recalling announced expertness, TV viewing habits both on the campus and at home, and prior instructional TV experience. Some classes rated an additional concept with 10 scales, this concept being the instructor who gave the talk.

5. Instructors.

Three volunteer instructors in the Social Science Department were used as the experimental instructors. All three had taught several years in the Department and were fully familiar with the subject matter. Instructors of about equal ability and skill in teaching were desired (for the possibility of collapsing the instructor dimension in analysis), however it was not possible to hand pick instructors beforehand on such a criterion as skill in teaching. It was assumed that the three instructors who volunteered were adept and skilled at teaching. Two of the instructors had appeared as guest lecturers on closed-circuit television in previous quarters of the course. The third had not appeared.

During two of the pretests, subjects were asked to rate the instructor they heard on the Semantic Differential scales. There were no differences between two of the instructors but the third instructor did not get as favorable ratings although most of the scales tested did not produce significant differences. In terms of the learning items, there were no significant differences among the three instructors in the pretests.

Instructors were prepared in three ways. (1) They were asked to prepare the script. Actually, one of the instructors wrote the draft script and the other two read and revised the script. (2) A rehearsal (one of the pretests) was carried out. This did not involve the use of TV but nevertheless gave instructors a chance to work their way through the script and get practice in delivery. Each of their performances were tape recorded and these were played back to them. (3) An on-camera rehearsal was carried out. At this session, members of the technical staff were present to iron out TV presentation difficulties. This rehearsal served to acclimate the instructors to actual conditions. One of the instructors, who had previously appeared on television, could not make this rehearsal because of prior committments. In addition to the above steps, the instructors were asked to rehearse in private to thoroughly familiarize themselves with the script.

6. Subjects.

A total of 764 students enrolled in 18 sections of the Social Science course were used as experimental subjects. An additional two sections totalling 76 students were used as the control group. Of the 764 students, 405 were in sections receiving face-to-face teaching treatment and 359 were in sections receiving television instruction.

It was first planned to control registration of students in such a manner that each section in the experiment would get an appropriate number of prior instructional television students. This was not considered feasible and classes were used without any direction of students into set sections. It was hoped that students with previous TV exposure would apportion themselves by chance such that each section of the experiment would have about 10 prior TV students registered.

To control for possible differences in sections due to differing times of the day, it was arbitrarily decided that only classes in the "choice" hours would be utilized for the experiment. "Choice" hours were defined as classes held between the hours of eight in the morning and three in the afternoon, excluding the lunch hour. Because of technical difficulty during one of the televised classes, a three pm class was used as a substitute for the original class.

Each section was used without any shifting of students. It was decided that preserving the regular course enrollment was important for normal performance by students. A check was made on comparability of classes by examining scores obtained by students on the American Council on Education intelligence test.[1] A simple analysis of variance comparing 20 means (18 experimental, two control sections) produced an F ratio of 1.23 which at 19 and 802 degrees of freedom is not significant at our arbitrary five percent significance level. The total number of subjects was 840, however, ACE scores could not be obtained on 19 cases and they were left out of the above analysis. Thus, on an index of intelligence, there was basis to assume that our classes did not come from different populations.

In addition to the ACE scores, the following data were obtained from each student on the testing sheet: (1) Name and student identification number; (2) Section number; (3) Estimate of the number of hours spent viewing commercial television while in school; (4) Estimate of the number of hours spent viewing commercial television while at home on vacations; (5) Whether they had had the fall quarter of the Social Science course by television;

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[1] The Linguistic or L score component of the ACE test was used as the index of intelligence.

and (6) Whether they had had the winter quarter by television. (See Appendix B).

7. Perceived prestige.

Three levels of announced prestige were used. The levels ideally would have been low, neutral and high prestige. However, it was not possible to introduce instructors as low prestige sources and therefore the three levels decided upon were ordinary classroom instructor (no announced expertness), the medium expert (announced as the expert on power politics in the Department) and high expert (announced as a national authority on the subject). Roughly, the prestige levels were intended to go from neutral to high. Thus, strict comparability with the Hovland experiments, where he used high and low sources, was not possible.

Announcements as to the prestige of the instructor were made several times to the class. The form of the announcements are given as Appendix F. As a check on whether they had heard the announcements, two questions were asked in the test booklets (see Appendix B), one was to name the instructor they had heard and the other was to describe his degree of expertness. No announcements were given to those sessions where the ordinary instructor was used and no identification questions were used in the test booklets.

8. Retention testing.

The week before the end of the quarter (eight weeks after the experimental sessions) all subjects were tested again. The same test booklets were used except for a change in the information sheet (Appendix C). On the recall of instructor and prestige condition the questions were put in multiple choice form whereas on the immediate posttest these questions were open ended.

Attrition took place in the eight weeks of the course. Where originally we started out with 764 experimental subjects and 76 control subjects, the numbers available for retention testing were 649 experimental subjects and 66 control subjects. Attrition was due to many causes such as dropping the course, absence on the day of retention testing, improper fill-in of identification so that immediate and delayed testing booklets could not be matched. To see if any section lost students disproportionately, a chi square was computed with proportion of loss from immediate to delayed posttesting for the total group as the multiplying term to compute expected loss for each group. The obtained chi square value of 2.821 was not significant at 18 degrees of freedom (the two control groups were combined for this analysis making a total of 19 groups). A chi square value of 28.869 is needed to reach the five percent level of significance.

The total numbers involved in each section of the experiment are given as Table 1 both for immediate and retention testings.

Table 1

Number of Subjects Available for Analysis in Each Section for Immediate and Delayed Testing

Section	Immediate posttest	Delayed posttest
1	47	39
2	48	42
3	45	41
4	42	34
5	42	37
6	39	34
7	45	40
8	45	37
9	43	33
10	43	36
11	31	27
12	38	34
13	41	31
14	44	41
15	47	40
16	43	35
17	43	34
18	38	34
19 (Control--two sections)	76	66
Totals	840	715

9. Procedure

The teaching load in the Social Science Department consists of three sections. The sections of the three experimental instructors plus the sections of three other instructors were utilized as experimental sections. The design called for each instructor to appear before six different sections--in three prestige versions under face-to-face and TV conditions. This was accomplished in five performances.

Each instructor appeared before one of his own sections in the ordinary instructor prestige condition for face-to-face presentation. He also did the same to another one of his own sections for the TV presentation. He appeared before two other sections face-to-face, once as a departmental expert and once as a national expert. For these two prestige conditions over TV, he appeared before camera once with the two viewing rooms utilized. Since the instructor in charge of the sections made the announcements, one viewing room could receive the experimental instructor as a departmental expert and the other viewing room section could receive the instructor as a national expert.

The experiment was started on a Friday and ended on Tuesday. Eleven experimental conditions were run off on Friday, two on Monday and the remaining five conditions on Tuesday. In the departmental expert over television for one of the instructors, the audio portion of the telecast did not work for the first 10 minutes of the session. The data collected for this session were thrown away and a substitute session was run on Wednesday.

Prior to the experimental sessions, all instructors concerned were given an orientation. Printed instructions about the conduct of the experiment were handed out (Appendix D). Except for the ordinary instructor prestige condition where the experimental instructors taught one of their own sections, each regular instructor was present throughout the performance of the experimental sessions even though someone else was lecturing.

On the day before the section was to receive the experimental message, dittoed announcements were passed out to students in that section. This announcement carried the name of the guest lecturer, the appropriate prestige label and introduction, and the room in which to assemble in the case of the TV sections. Face-to-face sections received the experimental message in their regularly assigned rooms. When these announcements were passed out, the instructor in charge read the announcement to the class aloud. He then put the pertinent information on the blackboard. At the end of the class period, the instructor again read the announcement. In this way, students were exposed four times to the announcement.

Just before the experimental message, the instructor in charge introduced the guest lecturer, again giving the prestige information. After the introduction, the experimental instructor gave his message. The message was written to take about 30 minutes. Variation in time of delivery of message ranged from 27 minutes to 31 minutes for the 18 sessions. Monitors from the Communication Research Center sat through each performance, reporting back all incidents on a form which was provided.(Appendix E). After the message, the instructor in charge handed out the test booklets. The time spent completing the booklets ranged from 9 minutes to 18 minutes.

The two control sections were given the test booklets to complete during the last 20 minutes of a regular class period. These sections were tested on Monday and Tuesday, the same days the experimental sessions were being conducted. Control test booklets did not have the page asking for identification of instructor and his prestige.

The instructor who gave the message was rated in the test booklets only for the departmental expert and national expert conditions. This page was omitted for the ordinary instructor condition and for the control classes. Since in the ordinary-instructor condition, the experimental instructor was lecturing to one of his own sections, it was not thought wise to have students rate him. In all other conditions, the experimental instructors were guest lecturers so that it was thought that students would not be reluctant to rate these persons.

Eight weeks after the experimental sessions, all classes involved were tested again. The same test booklets were used except for minor changes noted previously. In the iterim, no further discussion of the particular aspect of power politics used in the experimental message was carried out in the experimental sections. However, the control sections received such instruction about a week after the experimental sessions so that for retention test comparisons, no true control group wassavailable. Comparisons between the two control sections and the experimental sections for retention purposes could be described as ordinary prepared lecture versus specially prepared lecture.

B. The Advertising Project

Journalism 305, Introduction to Advertising, is a basic course in the advertising sequence at Michigan State University. Although students with majors in advertising are enrolled, the course is not limited to advertising majors and a fair number of non-major students usually enroll especially from Business Administration. The course is offered for upperclassmen and the majority of the students who enroll are juniors. Enrollment in former years was about 125-175 students. During the fall quarter 1957-1958 when this study was carried out, the contemplated enrollment was 140 but the number fell short of this mark.

The course was taught during this quarter in two sections, one in the morning and one in the early afternoon. One instructor handled both sections. In contrast to the Social Science course, students were aware of who was going to instruct them from catalog listing. Also in contrast to the Social Science course, a great many of the students enrolled were taking the course as an elective subject.

1. General methodology.

The Advertising Project, which followed the Social Science Project, was a term long study. The objective of the course from the standpoint of the College of Communication Arts was to explore and assess the feasibility of teaching advertising over television. The reasons for this were that advertising had never been taught over television before, that every means should be explored to handle future contemplated large enrollments, and that the instructor for the course desired to acquire experience in teaching over television. From the research standpoint, we were interested in testing in a term long situation some of the findings from the Social Science Project.

The general design of the study was simple analysis of variance. The groups to be compared were a regular face-to-face class, an in-studio class and a television class. The instructor variable was controlled by using the same instructor for all three groups. The message variable was controlled by having the same lectures and demonstrations given to the three groups.

2. Lecture content.

The interesting feature of the advertising course was the heavy dependence on visual materials. In order to emphasize certain points in advertising techniques, numerous illustrations were used. In most cases, these were 2x2 color slides but flip charts, miniature ad displays and actual ads were used. The list of visuals used is given as Appendix G.

The instructor prepared his content based on previous experience with the course. He was careful to have adequate notes such that there would be a minimum of variation in presentation in teaching a number of sections. Reading assignments were given from time to time but there was no regularly assigned text book.

3. Test materials.

The regular assignments, mid-term and final examination grades, and final quarter grades were used in analysis. In addition, two specially constructed quizzes were given. These quizzes were made up by the research staff. One of the quizzes concerned presentation of a series of visuals on three advertising campaigns during one of the class hours. An eight item test was made to test this session. The second speci special quizz covered visuals presented in another class period again concerned with three different types of advertising appeals. A ten item test was constructed for this class period.

An attitude questionnaire was administered during the next to the last week of the course. The Semantic Differential form was used. The concepts choses for rating were TEACHING BY TELEVISION, A CAREER IN ADVERTISING AND THE ADVERTISING BUSINESS. For the concept TEACHING BY TELEVISION, the scales *good-bad*, *easy-difficult*, *personal-impersonal*, *clear-hazy*, *interesting-boring*, *active-passive* and *easy to take notes-hard to take notes* were selected. Scales used with the concept a CAREER IN ADVERTISING were *attractive-unattractive*, *approve-disapprove*, *good-bad*, *high prestige-low prestige*, and *active-passive*. Scales used with THE ADVERTISING BUSINESS were *ethical-unethical*, *strong-weak*, *fair-unfair*, *good-bad* and *high paying-low paying*. The form in which this attitude questionnaire was made up is given as Appendix H.

In all there were eight regular assignments during the quarter. Four of these were book reports, one was a letter, one was an analysis of a print campaign, one was an analysis of TV programming and commercial content and one was a problem in copywriting. This latter assignment was given more weight than the other seven assignments. The mid term and final examination consisted of short answer questions.

4. Subjects.

There were 106 students enrolled in the two sections of the course. Of these 46 were enrolled in the morning (10 am) section. The other 60 were enrolled in the section which met at 2 pm. This latter section became the TV and in-studio groups, the main reason being that the 2 pm time period was the only time the closed-circuit facilities were available.

The 60 afternoon students were divided into two parts. ACE scores were available for these students and an attempt was made to divide on the basis of these scores. The ACE Linguistic scores had the following distributions for the three groups:

	Mean	S.D.
Face-to-face	6.00	1.54
In-studio	6.12	1.48
Television	6.04	1.93

There were no significant differences among the groups on these scores.

None of the students knew that the course was to be televised until the first day of class. At that time the announcement was made and students were assigned to either the viewing room or the originating room. Use of an in-studio group was discussed prior to running the study with the decision to use such a group determined by the instructor's desire to have a live audience for his televised lectures.

5. Procedure.

The instructor gave two lectures a day. As far as possible, he made an attempt to cover the same amount of ground for the two sections. It turned out, however, that he had a difficult time maintaining equal pace mainly because the morning face-to-face section raised more questions in class than either group in the afternoon section.

Since assignments were part of the course, no special procedural problems arose. For the two specially constructed quizzes, the last 15 minutes of the class session were used for testing purposes. No announcement was made of the quiz and nothing was said about the weight of the quiz on grades although in actuality the quiz results were not included in computing final grades.

A graduate assistant served as monitor. He attended both morning and afternoon sessions and was responsible for reporting untoward incidents from the standpoint of the study back to the Research Center. His presence was not thought to be distracting since he also functioned as attendance taker, proctor for examinations and other duties which classroom assistants usually perform. In the afternoon section, he divided his time between the in-studio and television groups.

III. RESULTS

A. The Social Science Project

When the design for the experiment was set up, it was assumed that each section of the Social Science course would have about 40 students. In a three way classification analysis of variance, equal numbers in each cell are highly desirable from a computational standpoint. If class sizes were about the same, then subjects could be thrown out of the analysis at random from each class to equalize numbers. Unfortunately, the range of class size was from 31 through 48. In order to equalize all cells in the analysis, 17 cases would have to be excluded from analysis in that class which had 48 students. Therefore an approximate means was found to conduct the analysis without eliminating subjects.

Snedecor and Cox (22) have outlined a method of using expected subclass numbers in cases of unequal numbers in cells of multiple classification. In this method, one tests the assumption of proportional subclass numbers by means of a chi square test. If the assumption is tenable, then instead of working with the actual number of people in each class, one works with expected numbers which are obtained by multiplying the mean of each class by the expected number of people as calculated from the marginals of the analysis table. For the immediate posttest, a chi square computed with the 18 experimental class produced a value of 2.28 which at 8 degrees of freedom is significant at the .95 level. For the delayed posttest, the obtained chi square value was 2.15 which at 8 d.f. is significant at the .95 level. In both the immediate and delayed posttests, the assumption of proportional subclass numbers seemed justified.

Although the three instructors used were volunteers for the experiment, it was assumed for the analysis that these three represented a random sample from the pool of instructors available. In this sense, the instructors variable could be viewed as three replications of the experimental design in which the main variables were mode and prestige conditions. In actually doing the analysis, we first tested the second order interaction against the within groups mean square. If the F value obtained was not significant, then the first order or simple interactions were tested against the within groups mean square as were the main effects. If the F obtained was significant, then the second order interaction mean square was used to test the first order interactions. All non-significant interactions were pooled with the second order interaction mean square along with the degrees of freedom for use as the error term in testing for main effects.

1. Instructor and prestige recognition.

In the check to see if students had received the correct prestige introduction, two questions were asked in the testing booklets. Only the classes involved in the departmental expert and national expert conditions received these questions. Of the 501 subjects, 488 or 97.4% correctly identified the name of the instructor. On the question of recall of the instructor's prestige, 483 or 96.4% made the correct association.

In the delayed posttest, on the question of instructor name, 471 out of 481 or 97.9% made a correct identification. It will be recalled that in the delayed posttest this question was put in a multiple choice form whereas in the immediate test, the question was open-ended. In recall of reputation, 434 or 90.2% answered correctly.

2. Experimental versus control.

Before the three way analysis of variance was undertaken, a comparison of the control classes with the experimental classes was done. The two classes composing the control group were first tested for differences by the "t" test. If no significant difference was found the two classes were combined to make one control group of 76 subjects. In all of the comparisons, no significant differences were found between the two classes making up the control group. The combined control group was compared with the combined television condition group by means of "t" tests and then with the combined face-to-face group. Table 2 gives the results of this analysis.

It can be seen from Table 2 that in 26 comparisons, 11 of the "t" tests between control and television groups were significant while 10 of the tests between control and face-to-face groups were significant. All 10 of the significant comparisons between control and face-to-face were significant also between control and television. The extra significant difference in the control/TV comparison was for the scale clear-hazy on the concept TEACHING BY TELEVISION.

One concept, FACE-TO-FACE TEACHING produced no significant differences. The concept TEACHING BY TELEVISION produced only one significant difference. The concept AUTHORITY produced significant differences in all comparisons. The means involved in those comparisons which produced significant differences are listed in Table 3.

Table 2

Results of Tests between Control Group and Television Group, and between Control Group and Face-to-face Group

Test	Control/TV "t" (433 d.f.)	Control/f-to-f "t" (479 d.f.)
TEACHING BY TELEVISION		
Evaluative	.278	.928
Activity	.422	.413
Potency	.330	.148
Interesting-dull	.250	1.306
Clear-hazy	2.238*	.860
FACE-TO-FACE TEACHING		
Evaluative	.113	.568
Activity	1.296	.716
Potency	.850	.256
Interesting-dull	.308	.250
Clear-hazy	.294	.523
AUTHORITY		
Evaluative	2.139*	2.020*
Activity	2.529**	3.042**
Potency	3.708**	4.066**
POWER POLITICS		
Evaluative	5.588**	6.452**
Activity	.245	.546
Potency	.766	.424
CASTE POWER PYRAMID		
Evaluative	8.045**	7.716**
Activity	4.575**	5.772**
Potency	1.923	.805
OLIGARCHICAL POWER PYRAMID		
Evaluative	3.831**	4.419**
Activity	.309	.822
Potency	2.895**	4.256**
DEMOCRATIC POWER PYRAMID		
Evaluative	3.016**	2.453**
Activity	1.349	1.798
Potency	1.050	.641
INFORMATION GAIN TEST	13.304**	15.358**

* significant beyond .05 level ** significant beyond .01 level

Table 3

Means of Control, Television and Face-to-Face Groups

Concept and scale	Control Mean	TV Mean	F-to-F Mean
TEACHING BY TELEVISION			
Clear-hazy*	3.40	2.94	3.22 (n.s.)
AUTHORITY			
Evaluative**	14.12	15.35	15.36
Activity***	5.34	6.04	6.13
Potency***	4.92	6.01	6.12
POWER POLITICS			
Evaluative	22.67	18.81	18.30
CASTE POWER PYRAMID			
Evaluative	23.72	29.26	29.13
Activity	7.93	9.96	9.88
OLIGARCHICAL POWER PYRAMID			
Evaluative	20.76	23.53	24.02
Potency	7.45	6.44	6.11
DEMOCRATIC POWER PYRAMID			
Evaluative	10.42	8.96	9.18
INFORMATION GAIN TEST****	5.05	8.88	9.42

* Possible scores run from 1 (extremely clear) to 7 (extremely hazy) with neutral at 4.

** Evaluative means are sums of four scales. Possible scores run from 4 (extremely favorable) to 28 (extremely unfavorable) with neutral at 16.

*** Activity and Potency means are sums of two scales each. Possible scores run from 2 (extremely active or extremely strong) to 14 (extremely passive or extremely weak) with neutral at 8.

**** Information gain test contained 15 items.

For the concept TEACHING BY TELEVISION, the television group thought it to be clearer on the clear-hazy scale in comparison with the control group. The face-to-face group did not differ from the controls. For the concept AUTHORITY, both the TV and face-to-face groups were less favorable compared with the control group, both thought the concept less active and less strong. All means however were on the favorable, active and strong side of neutral.

Both groups were less unfavorable towards the concept POWER POLITICS compared with the controls. All three groups means were on the unfavorable side of neutral. For the concept CASTE POWER PYRAMID, the TV and face-to-face groups were more unfavorable and thought the concept to be more passive in comparison with the controls. All groups were on the unfavorable and passive sides of neutral in their judgments.

The TV and face-to-face groups were more unfavorable towards the concept OLIGARCHICAL POWER PYRAMID but thought the concept to be stronger compared to controls. Both groups were more favorable towards the concept DEMOCRATIC POWER PYRAMID than the control group. In the learning test, both groups did significantly better than the controls.

3. Analyses of Variance on immediate posttests.

Thirty eight separate three-way classification analyses of variance were carried out. In the analyses, the word mode is used to describe the television and face-to-face condition, the word prestige is used for the normal instructor, departmental expert and national expert condition, and the word instructors is used for the experimental lecturer condition. The three instructors are identified by the letters A, B and C.

The expected subclass numbers computed for the analysis are given below as Table 4 for all concepts and the information gain test except the concepts in which the three instructors were rated. The expected subclass numbers from which the ratings of instructors were analyzed are given as Table 5.

Table 4

Expected Subclass Numbers for Information Gain Test and for All Concepts except Instructor Concepts

		MODE		
INSTRUCTORS	PRESTIGE	Television	Face-to-Face	Total
A	Normal	42.2186	47.6283	89.8469
	Dept.	39.3292	44.3686	83.6978
	Natl.	41.0948	46.3605	87.4553
	(Sub total)	122.6426	138.3574	261
B	Normal	40.9245	46.1684	87.0929
	Dept.	38.1236	43.0086	81.1322
	Natl.	39.8352	44.9395	84.7747
	(Sub total)	118.8834	134.1166	253
C	Normal	40.4393	45.6210	86.0603
	Dept.	37.6716	42.4986	80.1702
	Natl.	39.3628	44.4066	83.7694
	(Sub total)	117.4738	132.5262	250
	Grand total	359	405	764

Table 5

Expected Subclass Numbers for Instructor Concepts

INSTRUCTORS	PRESTIGE	MODE Television	 Face-to-Face	Total
A	Dept.	39.6215	44.4902	84.1117
	Natl.	41.4005	46.4878	87.8883
	(Sub total)	81.0220	90.9780	172
B	Dept.	37.5483	42.1623	79.7106
	Natl.	39.2341	44.0553	83.2894
	(Sub total)	76.7824	86.2176	163
C	Dept.	38.2394	42.9383	81.1777
	Natl.	39.9562	44.8661	84.8223
	(Sub total)	78.1956	87.8044	166
	Grand total	265	236	501

a. Concept TEACHING BY TELEVISION

Analysis of variance on the summed evaluative scales produced a significant F for the second order interaction. The results are given in Table 6.

Table 6

Analysis of Variance on Evaluative Scales for
Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	35.2128	1	35.2128	
Between Prestige	6.7429	2	3.3715	
Between Instructors	29.2285	2	14.6143	
Interaction Mode x Prest.	378.4228	2	189.2114	
Interaction Mode x Inst.	35.5439	2	17.7720	
Interaction Prest. x Inst.	194.4823	4	48.6206	
Interaction Mode x Prest. x Inst.	357.1601	4	89.2900	3.778**
Total Between	1, 036.7933	17		
Within Groups	17,630.8232	746	23.6338	
TOTAL	18,667.6165	763		

** Significant beyond .01 level.

The first order interactions were tested for significance against the triple interaction mean square and none produced a significant F. The interactions sum of squares and the degrees of freedom were pooled to produce a mean square of 80.4674 with 12 degrees of freedom. It can be seen that testing the main effects against this error term produces F values of less than one, meaning that none of the variables produce significant differences.

Analysis of variance on the summed activity scales produced a significant F for the Mode x Prestige interaction. The results are given in Table 7.

Table 7

Analysis of Variance on Activity Scales for
Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	13.2388	1	13.2388	2.056
Between Prestige	35.6846	2	17.8423	2.770
Between Instructors	12.6499	2	6.3249	<1
Interaction Mode x Prest.	57.9777	2	28.9889	4.501*
Interaction Mode x Inst.	21.3841	2	10.6921	1.660
Interaction Prest. x Inst.	71.3071	4	17.8267	2.768
Interaction Mode x Prest. x Inst.	41.8042	4	10.4511	1.623
Total Between	254.0464	17		
Within Groups	4804.8489	746	6.4408	
TOTAL	5058.8953	763		

* Significant beyond .05 level.

Means for Mode and Prestige

	TV	F-to-F
Normal	7.33	7.29
Dept. Expert	7.74	7.55
Natl. Expert	7.25	8.30

Control Mean 7.57

For these means, the range of scores possible is 2 (extremely active) to 14 (extremely passive). Neutral is 8. It can be seen that for the face-to-face condition, the "lower" the announced prestige of the instructor, the more active the subjects feel television teaching is. The national expert in the face-to-face situation produces a judgment of very slightly passive for television teaching. In the TV group, the conditions of "normal" instructor and national expert produce judgments of TV teaching as more active than the departmental expert condition.

Analysis of variance on the summed potency scales produced the same results as the activity analysis. The results of Anova are given in Table 8.

As in Table 7, the analysis shown in Table 8 produced a significant Mode x Prestige interaction. Again the pattern is similar to the activity analysis. For the face-to-face condition, the "lower" the expertness, the stronger the concept is judged. For the national expert condition, the judgment of TV teaching is that it is slightly weak. The range of possible scores is the same as the activity scales--from 2 (very strong) to 14 (very weak) with neutral at 8. For the TV group, teaching by television is judged to be the least strong in the "normal" instructor situation. The concept is judged to be strongest in the departmental expert condition.

Table 8

Analysis of Variance on Potency Scales for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.1449	1	.1449	<1
Between Prestige	31.8400	2	15.9200	2.365
Between Instructors	19.7272	2	9.8636	1.466
Interaction Mode x Prest.	54.8391	2	27.4196	4.074*
Interaction Mode x Inst.	12.6245	2	6.3122	<1
Interaction Prest. x Inst.	35.2086	4	8.8021	1.308
Interaction Mode x Prest. x Inst.	59.7339	4	14.9334	2.219
Total Between	214.1182	17		
Within Groups	5,021.0690	746	6.7306	
TOTAL	5,235.1872	763		

*Significant beyond .05 level.

Means for Mode and Prestige

	TV	F-to-F
Normal	7.92	7.19
Dept. Expert	7.41	7.48
Natl. Expert	7.60	8.16

Control Mean 7.55

On the scale interesting-dull, the following results were obtained.

Table 9

Analysis of Variance on Scale Interesting-Dull
for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	21.3823	1	21.3823	7.838**
Between Prestige	.1017	2	.0509	<1
Between Instructors	3.2728	2	1.6364	<1
Interaction Mode x Prest.	28.6436	2	14.3218	5.250**
Interaction Mode x Inst.	8.5661	2	4.2830	1.570
Interaction Prest. x Inst.	29.3153	4	7.3288	2.686*
Interaction Mode x Prest. x Inst.	5.8642	4	1.4660	<1
Total Between	97.1460	17		
Within Groups	2,035.2362	746	2.7281	
TOTAL	2,132.3822	763		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Mode

TV	F-to-F
3.30	2.98

Means for Prestige and Mode

	TV	F-to-F
Normal	3.60	2.74
Dept. Expert	3.20	3.10
Natl. Expert	3.10	3.28

Control Mean 3.25

Means for Prestige and Instructors

	A	B	C
Normal	3.23	3.02	3.18
Dept.	2.77	3.53	3.19
Natl.	3.18	2.89	3.29

It can be seen from Table 9 that the mode of presentation makes a difference on judgments of whether TV teaching is interesting. The means presented in Table 9 are based on a 7 point scale with 1 being extremely interesting, 7 being extemely dull and 4 being neutral. Those who received instruction face-to-face feel that TV teaching is more interesting compared with those who received the instruction by TV. This may reflect an "expectation" versus "reality" phenomena; that is, persons who have not received TV instruction may think about what TV instruction should be like while those who have received TV instruction find that the reality doesn't live up to their hopes.

Two significant interactions--Mode x Prestige and Prestige x Instructors --were produced. In the Mode x Prestige interaction, the same pattern is apparent for the face-to-face group that was found for the activity and potency analyses. Ratings of TV teaching as interesting go down as prestige level goes up. For the TV group the opposite is true. Ratings of interesting for TV teaching go up as prestige level goes up. In the Prestige x Instructor interaction, individual differences among instructors are revealed. For instructor A, ratings of interesting for TV teaching are highest when he is announced as a departmental expert, next highest when he is a national expert and lowest when he is performing as a "normal" instructor. Instructor B subjects produce the highest ratings when he is a national expert, next highest when he is a "normal" instructor and lowest when he is a departmental expert. Instructor C students' ratings of interesting go down as prestige level goes up.

On the scale clear-hazy, analysis produced a significant F for the second order interaction. The results are given in Table 10.

Table 10

Analysis of Variance on Scale Clear-Hazy for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	15.3602	1	15.3602	
Between Prestige	2.5702	2	1.2851	
Between Instructors	.4778	2	.2389	
Interaction Mode x Prest.	33.4372	2	16.7186	
Interaction Mode x Inst.	.0499	2	.0249	
Interaction Prest. x Inst.	7.5398	4	1.8849	
Interaction Mode x Prest. x Inst.	39.6906	4	9.9226	3.923**
Total Between	99.1257	17		
Within Groups	1886.8219	746	2.5292	
TOTAL	1985.9476	763		

** Significant beyond .01 level.

The first order interactions were tested for significance against the second order interaction mean square with no significant F's produced. The pooled interactions produced a mean square of 80.7175 with 12 degrees of freedom. As can be seen from Table 10, all of the main effects mean squares are considerably less than the pooled error term. Thus, for this scale, there were no significant main effects.

For the concept TEACHING BY TELEVISION, we can summarize the immediate posttest results thus: On the evaluative factor, no significant main effects, no significant simple interactions, a significant second order or triple interaction; on the activity dimension, no significant main effects, a significant mode-prestige level interaction; on the potency scales, no significant main effects, a significant mode-prestige level interaction; on the scale interesting-dull, a significant difference between TV and face-to-face with the latter group rating the concept as more interesting, a significant mode-prestige level interaction and a significant prestige level-instructors interaction; on the scale clear-hazy, no significant main effects, no significant simple interactions, a significant second order interaction.

b. Concept FACE-TO-FACE TEACHING

Analysis of variance for the summed evaluative scales produced no significant differences. Similarly, for the scale clear-hazy, there were no significant differences. This is like the ratings for the concept TEACHING BY TELEVISION where the evaluative scales and the scale clear-hazy produced no main effect significances. In both these prior analyses, however, a significant second order interaction was produced whereas in this case no such differences appeared.

For the activity scales, a significant mode difference was found. The results are given in Table 11.

Those who received the lecture over TV thought that face-to-face teaching was significantly less active in comparison with judgments of those who received the lecture face-to-face. It will be recalled that in judging television teaching, TV and face-to-face groups did not differ from each other in their judgments of activity.

Table 11

Analysis of Variance on Activity Scales for Concept FACE-TO-FACE TEACHING

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	57.0318	1	57.0318	11.245**
Between Prestige	1.8277	2	.9139	<1
Between Instructors	6.4653	2	3.2327	<1
Interaction Mode x Prest.	14.8397	2	7.4199	1.463
Interaction Mode x Inst.	7.4492	2	3.7246	<1
Interaction Prest. x Inst.	27.5636	4	6.8909	1.359
Interaction Mode x Prest. x Inst.	37.9675	4	9.4919	1.872
Total Between	153.1448	17		
Within Groups	3783.4364	746	5.0716	
TOTAL	3936.5812	763		

** Significant beyond .01 level.

Means for Mode

TV	F-to-F	Control
5.94	5.57	5.59

On the potency scales, the analysis revealed a significant second order interaction. The results are given in Table 12.

Table 12

Analysis of Variance on Potency Scales
for Concept FACE-TO-FACE TEACHING

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	19.1607	1	19.1607	
Between Prestige	17.5176	2	8.7588	
Between Instructors	12.6391	2	6.3196	
Interaction Mode x Prest.	.7020	2	.3510	
Interaction Mode x Inst.	12.2973	2	6.1487	
Interaction Prest. x Inst.	62.0676	4	13.0169	
Interaction Mode x Prest. x Inst.	55.3922	4	13.8481	2.771*
Total Between	179.7765	17		
Within Groups	3728.6790	746	4.9982	
TOTAL	3908.4555	763		

* Significant beyond .05 level.

Testing the simple interactions against the second order interaction produced no significant differences. The pooled error term was 10.8716 at 12 degrees of freedom. As can be seen from Table 12, testing the Prestige mean square and the Instructors mean square against the pooled error term produced F ratios of less than one. The Mode comparison produced an F of 1.762 which was not significant.

On the scale interesting-dull, no significant main effects were found but the Mode x Prestige interaction was found to be significant. For the same scale on the concept TEACHING BY TELEVISION, the same interaction was found to be significant also. The results of the analysis are given in Table 13.

Table 13

Analysis of Variance on Scale Interesting-Dull
for Concept FACE-TO-FACE TEACHING

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.0473	1	.0473	<1
Between Prestige	.8895	2	.4448	<1
Between Instructors	1.1838	2	.5919	<1
Interaction Mode x Prest.	12.7155	2	6.3578	4.816**
Interaction Mode x Inst.	2.3940	2	1.1970	<1
Interaction Prest. x Inst.	8.6430	4	2.1608	1.637
Interaction Mode x Prest. x Inst.	6.9219	4	1.7305	1.311
Total Between	32.7950	17		
Within Groups	984.8280	746	1.3201	
TOTAL	1017.6230	763		

** Significant beyond .01 level.

Means for Prestige and Mode

	TV	F-to-F
Normal	2.19	1.94
Dept. Expert	2.18	2.10
Natl. Expert	1.94	2.30

Control Mean 2.14

Inspection of the means in Table 13 reveals the same pattern found for the analysis of the scale interesting-dull for the TV teaching concept. For the TV group, ratings of face-to-face teaching as interesting go up as prestige level goes up; for the face-to-face group ratings of face-to-face teaching as interesting go down as prestige level goes up.

The results of the analyses on the concept FACE-TO-FACE TEACHING show the following: On the evaluative scales, no significant differences; on the activity scales, a significant main effect between TV group and face-to-face group with the TV group rating the concept as less active; on the potency scales, no significant main effects or simple interactions, a significant second order interaction; on the scale interesting-dull, no significant main effects, a significant mode-prestige level interaction; on the scale clear-hazy, no significant differences.

c. Concept AUTHORITY

Analyses revealed no significant differences on ratings of this concept on the evaluative and potency scales. On the activity scales, the only significant F produced was for the second order interaction. Testing the first order interactions produced no significant F ratios. The pooled error term was 5.0994 with 12 degrees of freedom. Testing the main effects against this error term produced no significant F ratios. The analysis is presented as Table 14.

Table 14

Analysis of Variance on Activity Scales
for Concept AUTHORITY

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	2.5114	1	2.5114	
Between Prestige	20.9620	2	10.4810	
Between Instructors	20.3250	2	10.1625	
Interaction Mode x Prest.	5.6642	2	2.8321	
Interaction Mode x Inst.	4.2781	2	2.1391	
Interaction Prest. x Inst.	6.3222	4	1.5806	
Interaction Mode x Prest. x Inst.	44.9288	4	11.2322	2.589*
Total Between	104.9917	17		
Within Groups	3236.9559	746	4.3391	
TOTAL	3341.9476	763		

* Significant beyond .05 level.

d. Concept POWER POLITICS

Analysis of judgemnts on the evaluative scales produced a significant Prestige x Instructor interaction. The analysis is presented in Table 15. Five scales were used as evaluative scales, it will be recalled. Thus the range of scores possible was from 5 (extremely favorable) to 35 (extremely unfavorable) with neutral being 20. This range of possible scores also applies to the evaluative scale analyses for the next three concepts, CASTE POWER PYRAMID, OLIGARCHICAL POWER PYRAMID and DEMOCRATIC POWER PYRAMID.

Table 15

Analysis of Variance on Evaluative Scales for Concept POWER POLITICS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	57.1688	1	57.1688	2.094
Between Prestige	97.5302	2	48.7651	1.786
Between Instructors	123.4840	2	61.7420	2.261
Interaction Mode x Prest.	22.0821	2	11.0411	<1
Interaction Mode x Inst.	20.1199	2	10.0600	<1
Interaction Prest. x Inst.	272.7943	4	68.1986	2.498*
Interaction Mode x Prest. x Inst.	95.4111	4	23.8528	<1
Total Between	688.5904	17		
Within Groups	20367.5248	746	27.3023	
TOTAL	21056.1152	763		

* Significant beyond .05 level.

Means for Prestige and Instructors

	A	B	C
Normal	19.76	18.60	17.85
Dept. Expert	17.91	20.04	18.59
Natl. Expert	18.33	17.85	17.58

Control Mean 22.67

For Instructor A, ratings of Power Politics from the standpoint of favorability is closest to neutral (the desired direction) when he is a "normal" instructor, next closest when he is the departmental expert and furthest when he is a national expert. For Instructors B and C, ratings are closest to neutral when they are departmental experts, next closest when they are "normal" instructors and furthest when they are national experts.

It should be noted here, however, that in comparison with the control group, who are slightly unfavorable to the concept, eight of nine experimental groups are slightly favorable with the ninth group at neutral. In the "t" tests conducted between control group and experimental groups (Tables 2 and 3), the differences were significant. It might be said that the effect of the speech was to move subjects from slight unfavorability toward power politics to a position of slight favorability.

On the activity and potency scales, analyses produced no significant differences. All groups, including the control group, judged the concept POWER POLITICS to be somewhat active and somewhat strong.

e. Concept CASTE POWER PYRAMID

Analyses of the evaluative and activity scales produced no significant differences. Analysis of the potency scales did produce a significant difference between modes. The face-to-face group rated this concept as significantly stronger than did the TV group. Results are presented as Table 16. Means are based on summation of two scales with a range of 2 to 14.

Table 16

Analysis of Variance on Potency Scales for Concept CASTE POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	50.8970	1	50.8970	4.334*
Between Prestige	9.9353	2	4.9677	<1
Between Instructors	61.2090	2	30.6045	2.606
Interaction Mode x Prest.	7.8938	2	3.9469	<1
Interaction Mode x Inst.	34.3722	2	17.1861	1.463
Interaction Prestige x Inst.	69.5610	4	17.3903	1.481
Interaction Mode x Prest. x Inst.	22.5532	4	5.6383	<1
Total Between	256.4215	17		
Within Groups	8758.0222	746	11.7400	
TOTAL	9014.4437	763		

* Significant beyond .05 level.

Means for Mode

TV	F-to-F	Control
7.70	7.20	6.86

f. Concept OLIGARCHICAL POWER PYRAMID

Analyses of the evaluative and potency scales for this concept produced no significant differences. Analysis of the acitvity scales produced a significant prestige main effect. The results are presented in Table 17.

Table 17

Analysis of Variance on Activity Scales
for Concept OLIGARCHICAL POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	3.7784	1	3.7784	<1
Between Prestige	47.1161	2	23.5581	3.975*
Between Instructors	9.1208	2	4.5604	<1
Interaction Mode x Prest.	17.1683	2	8.5842	1.448
Interaction Mode x Inst.	5.2231	2	2.6116	<1
Interaction Prestige x Inst.	11.2858	4	2.8215	<1
Interaction Mode x Prest. x Inst.	41.6378	4	10.4095	1.7567
Total Between	135.3303	17		
Within Groups	4420.4132	746	5.9255	
TOTAL	4555.7435	763		

* Significant beyond .05 level

Means for Prestige

Normal	Dept. Expert	Natl. Expert	Control
7.26	6.66	7.01	7.16

The departmental expert condition produces the rating of most active for this concept. This is followed by the national expert condition and then by the normal instructor condition. All ratings including the control group are on the active side of the neutral point.

g. Concept DEMOCRATIC POWER PYRAMID

The potency and activity scales did not produce any significant differences for this concept. In the analysis of evaluative scales, a significant Prestige x Instructors interaction was produced. The results are given in Table 18.

Table 18

Analysis of Variance on Evaluative Scales for Concept DEMOCRATIC POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	11.7879	1	11.7879	<1
Between Prestige	23.0923	2	11.5412	<1
Between Instructors	12.1159	2	6.0580	<1
Interaction Mode x Prest.	56.1949	2	28.0975	1.927
Interaction Mode x Inst.	4.8610	2	2.4305	<1
Interaction Prest. x Inst.	231.8003	4	57.9501	3.975*
Interaction Mode x Prest. x Inst.	84.0376	4	21.0094	1.441
Total Between	423.8799	17		
Within Groups	10875.4081	746	14.5783	
TOTAL	11299.2880	763		

** Significant beyond .01 level.

Means for Prestige and Instructors

	A	B	C
Normal	8.93	9.80	7.82
Dept. Expert	9.01	8.75	9.44
Natl. Expert	8.82	9.21	9.85

Control mean 10.42

It can be seen from the means that all experimental groups rated the concept extremely favorably (5 is the most favorable possible score). All of these groups are more favorable than the control group. For Instructor A, ratings of the concept is most favorable when he appears as a national expert, next most favorable when he is a "normal" instructor and least favorable when he is a departmental expert. Instructor B students produce the most favorable scores when he is the departmental expert, the next most favorable when he is a national expert and least favorable when he is a "normal" instructor. Instructor C students rate the concept less favorably as prestige level goes up.

The results of the analyses on the five concepts concerned with the subject matter of the lecture may be summarized in this fashion:

AUTHORITY	*Evaluation*--no significant differences; *activity*--significant second order interaction; *potency*--no significant differences.
POWER POLITICS	*Evaluation*--significant prestige level-instructors interaction; *activity*--no significant differences; *potency*--no significant differences.
CASTE POWER PYRAMID	*Evaluation*--no significant differences; *activity*--no significant differences; *potency*--significant difference between TV and face-to-face groups with the latter group rating the concept as significantly stronger.
OLIGARCHICAL POWER PYRAMID	*Evaluation*--no significant differences; *activity*--significant difference in prestige levels with departmental expert condition producing ratings of the concept as most active, national expert condition producing next most active ratings, followed by normal instructor condition; *potency*--no significant differences.
DEMOCRATIC POWER PYRAMID	*Evaluation*--significant prestige level-instructors interaction; *activity*--no significant differences; *potency*--no significant differences.

h. Ratings of experimental instructors

For each departmental expert and national expert condition, ratings of the instructor himself were obtained. The normal instructor situation was not used in this analysis. *Evaluative* scale scores ranged from 3 (most favorable) to 21 (least favorable) with neutral at 12. *Potency* and *activity* scales were summation of two scales each as in the prior analyses with a range from 2 to 14.

Analysis of *evaluative* scales produced a significant between instructor difference. In addition a significant Prestige x Instructor interaction was found. The results are given in Table 19.

Table 19

Analysis of Variance for Evaluative Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.7040	1	.7040	<1
Between Prestige	3.0829	1	3.0829	<1
Between Instructors	334.4473	2	167.2237	19.59**
Interaction Mode x Prest.	5.2880	1	5.2880	<1
Interaction Mode x Inst.	12.2627	2	6.1314	<1
Interaction Prest. x Inst.	65.5635	2	32.7818	3.84*
Interaction Mode x Prest. x Inst.	38.2765	2	19.1383	2.42
Total Between	459.6249	11		
Within Groups	4173.5168	489	8.3548	
TOTAL	4633.1417	500		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Instructors

A	6.06
B	6.26
C	8.00

Means for Instructors and Prestige

	Dept. Expert	Natl. Expert
A	5.78	6.34
B	6.50	6.06
C	8.58	7.45

It can be seen from inspection of the means that all groups rated each instructor favorably. However, A got the highest ratings, B second and C third. Further, B and C are seemingly helped by a higher prestige level. Their ratings get more favorable as prestige level goes up. A, however, is the reverse. He gets a less favorable rating as prestige level goes up.

For activity scales a significant between instructor difference was found. Instructor B was rated as most active, followed by A and then by C. The results of the analysis are presented in Table 20.

Table 20

Analysis of Variance for Activity Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	2.7244	1	2.7244	<1
Between Prestige	13.5350	1	13.5350	2.64
Between Instructors	385.9432	2	192.9716	37.65**
Interaction Mode x Prest.	1.7951	1	1.7951	<1
Interaction Mode x Inst.	18.0866	2	9.0433	1.76
Interaction Prest. x Inst.	10.5053	2	5.2527	1.02
Interaction Mode x Prest. x Inst.	22.2846	2	11.1423	2.17
Total Between	454.8742	11		
Within Groups	2506.1198	489	5.1250	
TOTAL	2960.9940	500		

** Significant beyond .01 level.

Means for Instructors

A	B	C
5.38	4.97	7.02

In the analysis of potency scales, an instructor difference was found again. In addition a prestige difference was found. Instructor B was rated as strongest although closely followed by A. Instructor C was rated as less strong. In the prestige conditions, higher ratings of strength were given instructors performing as national experts than when they were performing as departmental experts. Results are given in Table 21.

Table 21

Analysis of Variance for Potency Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	1.1151	1	1.1151	<1
Between Prestige	23.9110	1	23.9110	6.16**
Between Instructors	154.9987	2	77.4994	19.98**
Interaction Mode x Prest.	.0923	1	.0923	<1
Interaction Mode x Inst.	9.9762	2	4.9681	1.28
Interaction Prest. x Inst.	.5446	2	.2723	<1
Interaction Mode x Prest. x Inst.	.4851	2	.2426	<1
Total Between	191.1230	11		
Within Groups	1897.1445	489	3.8796	
TOTAL	2088.2675	500		

** Significant beyond .01 level.

Means for Instructors

A	B	C
5.36	5.34	6.53

Means for Prestige

Dept. Expert	Natl. Expert
5.96	5.53

The scale interesting-dull produced a significant second order interaction. Testing the simple interactions against the second order interaction produced no significant F ratios. The interactions and their degrees of freedom were combined. Testing for main effects against this pooled error term produced a significant between instructor difference. Instructor A was rated as most interesting followed closely by B. C was rated as less interesting. The results of the analysis using the pooled interaction is presented as Table 22.

Table 22

Analysis of Variance using Pooled Interactions for Scale Interesting-Dull on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.0263	1	.0263	<1
Between Prestige	10.4064	1	10.4064	<1
Between Instructors	130.8715	2	65.4358	9.64**
Pooled Interactions	47.5162	7	6.7880	
Within Groups	995.0279	489		
TOTAL	1183.8483	500		

** Significant beyond .01 level.

Means for Instructors

A	B	C
2.17	2.21	3.29

The scale clear-hazy produced two significant F ratios. The differences among instructors was significant with A getting the rating of clearest, followed by B and then by C. A prestige effect was also found. Instructors were rated as clearer when they performed as national experts than when they were departmental experts. Results are given in Table 23.

Table 23

Analysis of Variance for Scale Clear-Hazy on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.7287	1	.7287	<1
Between Prestige	5.7226	1	5.7226	3.99*
Between Instructors	60.4274	2	30.2137	21.06**
Interaction Mode x Prest.	.2488	1	.2488	<1
Interaction Mode x Inst.	1.3258	2	.6629	<1
Interaction Prest. x Inst.	2.5902	2	1.2951	<1
Interaction Mode x Prest. x Inst.	5.9029	2	2.9515	2.06
Total Between	76.9464	11		
Within Groups	701.5326	489	1.4346	
TOTAL	778.4790	500		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Instructors

A	B	C
1.57	1.80	2.39

Means for Prestige

Dept. Expert	Natl. Expert
2.02	1.82

The final analysis for rating of instructors was for the scale expert-inexpert. Here again a between instructor difference was found. Instructor A received the highest expert rating followed by B and then by C. The analysis failed to show a difference in expertness as a function of prestige or expert level, something we would expect if the two prestige levels were operating as intended. That no main effect for prestige was found in this analysis throws some doubt on the tenability of the assumption that departmental expert and national expert labels would be perceived as differing in level of expertness. The results of the analysis are given in Table 24.

Table 24

Analysis of Variance for Scale Expert-Inexpert on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	2.0871	1	2.0871	2.05
Between Prestige	1.6859	1	1.6859	1.65
Between Instructors	12.0407	2	6.0204	5.92**
Interaction Mode x Prestige	.1009	1	.1009	<1
Interaction Mode x Inst.	5.6360	2	2.8180	2.77
Interaction Inst. x Prest.	.1427	2	.0714	<1
Interaction Mode x Prest. x Inst.	.0130	2	.0065	<1
Total Between	21.7063	11		
Within Groups	497.2797	489	1.0169	
TOTAL	518.9860	500		

** Significant beyond .01 level.

Means for Instructors

A	B	C
1.65	1.77	2.02

From the six analyses on rating of experimental instructors, the following summary can be presented: Instructor A is rated most favorably of the three, is rated the most interesting, the clearest, and the most expert. Instructor C is consistently last in all six analyses. Instructor B is between instructors A and C in four of the analyses. He is rated the most active and the strongest in the other two analyses although instructor A is very close to him. In two analyses, for the potency scales and for the scale clear-hazy, being a national expert elicits ratings of stronger and clearer in comparison with the departmental expert condition. In only one instance, the analysis for evaluation, is there a significant interaction. In this analysis, the instructor-prestige level interaction is significant. No significant difference between modes--face-to-face versus TV--is produced in any of the analyses.

i. Learning test

Analysis of variance on the 15 item information gain test produced two significant main effects. In the mode difference, face-to-face students did significantly better than TV students. This is a rather surprising finding in light of many past studies in which there is no significant difference between the two groups. When differences have been found previously, the TV student has done better than the face-to-face student (16). The other main effect is an instructor difference. Here, as one might suspect from the findings in the section above, Instructor A produces the most learning followed by B and then by C. The results are given in Table 25.

Table 25

Analysis of Variance on 15 Item Information Gain Test

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	65.3599	1	65.3599	12.24**
Between Prestige	11.7131	2	5.8566	1.10
Between Instructors	131.0943	2	65.5472	12.27**
Interaction Mode x Prest.	23.5460	2	11.7730	2.20
Interaction Mode x Inst.	13.4573	2	6.7287	1.26
Interaction Prest. x Inst.	46.0821	4	11.5205	2.16
Interaction Mode x Prest. x Inst.	15.5448	4	3.8862	<1
Total Between	306.7975	17		
Within Groups	3982.7575	746	5.3402	
TOTAL	4290.5550	763		

** Significant beyond .01 level.

Means for Modes		Means for Instructors		
TV	F-to-F	A	B	C
8.88	9.43	9.64	9.21	8.63

Control mean 5.05

4. Analysis of Variance on delayed posttests.

The analysis on delayed posttests was executed using difference scores. In all cases the delayed posttest score was subtracted from the immediate posttest score. The control group was lost in this analysis. The reason for this was that the control group was exposed to the subject matter covered in the experimental message as part of their regular assignment for the course. Thus, all subjects used in this study, as well as all students in the course, had received the section on power politics by the time the delayed posttests were given.

a. Concept TEACHING BY TELEVISION

For this concept, no significant differences on difference scores was produced for the analyses on the evaluative scales, potency scales and the scale interesting-dull. In the analysis on activity scales, a significant Mode x Prestige interaction was produced. The results are given in Table 26.

Table 26

Analysis of Variance of Difference Scores on Activity Scales
for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	18.8683	1	18.8683	2.49
Between Prestige	31.3700	2	15.6850	2.07
Between Instructors	27.7785	2	13.8893	1.84
Interaction Mode x Prest.	82.8245	2	41.4123	5.47**
Interaction Mode x Inst.	13.7154	2	6.8577	1
Interaction Prest. x Inst.	39.9679	4	9.9920	1.32
Interaction Mode x Prest. x Inst.	25.4872	4	6.3718	<1
Total Between	240.0118	17		
Within Groups	4773.9882	631	7.5657	
TOTAL	5014.0000	648		

** Significant beyond .01 level.

Mean Difference Scores for Prestige and Mode

	TV	F-to-F
Normal	.10	-1.14
Dept. Expert	-.36	.13
Natl. Expert	.12	.04

A minus figure as a mean difference score means that the delayed posttest score was larger than immediate posttest score--in this case the change was toward less active. A positive mean difference score means that the delayed posttest score was smaller than the immediate posttest score--in this case change was toward more active in ratings. The range which difference scores can theoretically have for the case of activity scales is from zero (no change) to plus or minus 12 (maximum change). It can be seen from the means shown in the above table that change is very small from immediate to delayed posttest. The cell contributing to the interaction significance is the face-to-face normal instructor condition.

For the scale clear-hazy, a significant mode difference was produced. The TV group changed more than the face-to-face group. Both groups changed to rating the concept as less clear compared with their immediate posttest ratings. The results are presented in Table 27.

Table 27

Analysis of Variance of Difference Scores on Scale Clear-Hazy for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	11.1381	1	11.1381	3.95*
Between Prestige	2.1813	2	1.0907	<1
Between Instructors	15.6948	2	7.8474	2.78
Interaction Mode x Prest.	1.7371	2	.8686	<1
Interaction Mode x Inst.	.4606	2	.2303	<1
Interaction Prestige x Inst.	10.1203	4	2.5301	<1
Interaction Mode x Prest. x Inst.	7.5365	4	1.8841	<1
Total Between	48.8687	17		
Within Groups	1778.1313	631	2.8180	
TOTAL	1827.0000	648		

* Significant beyond .05 level.

Mean Difference Scores for Mode

TV	F-to-F
-.32	-.16

b. Concept FACE-TO-FACE TEACHING

In only one of the analyses for this concept was a significant F obtained. This was a Mode x Prestige interaction for the scale interesting-dull. For the analyses on the evaluative, activity, potency scales and the scale clear hazy, no differences were found. The analysis for interesting-dull is presented as Table 28.

Table 28

Analysis of Variance of Difference Scores on Scale Interesting-Dull for Concept FACE-TO-FACE TEACHING

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.0078	1	.0078	<1
Between Prestige	1.9133	2	.9567	<1
Between Instructors	.4264	2	.2132	<1
Interaction Mode x Prest.	17.0159	2	8.5080	4.91**
Interaction Mode x Inst.	1.2093	2	.6047	<1
Interaction Prestige x Inst.	5.4733	4	1.3683	<1
Interaction Mode x Prest. x Inst.	10.8871	4	2.7218	1.57
Total Between	36.9331	17		
Within Groups	1093.0069 1093.0669	631	1.7323	
TOTAL	1130.0000	648		

** Significant beyond .01 level

Mean Difference Scores for Mode and Prestige

	TV	F-to-F
Normal	.09	-.15
Dept. Expert	.02	.12
Natl. Expert	.33	.02

The two mean difference scores which produce the interaction significance are the "normal" face-to-face condition, which was the only condition to change to a less interesting rating, and the national expert TV condition, which produced the largest change to a more interesting rating.

c. Concept AUTHORITY

No significant differences were found on the evaluative scales for this concept. On the activity scales, a significant prestige difference and a significant instructor difference were found. The national expert condition produced the largest difference score, the departmental expert condition next highest and the normal instructor condition produced the smallest. All changes were toward rating the concept as more active. Among instructors, A produced the largest difference score followed by B and then by C. Again all changes were toward a more active rating of the concept. Results are presented in Table 29.

Table 29

Analysis of Variance of Difference Scores on Activity Scales for Concept AUTHORITY

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	10.2275	1	10.2275	1.57
Between Prestige	48.1343	2	24.0672	3.70*
Between Instructors	54.5618	2	27.2809	4.19*
Interaction Mode x Prest.	13.7832	2	6.8916	1.06
Interaction Mode x Inst.	26.3237	2	13.1619	2.02
Interaction Prestige x Inst.	36.7124	4	9.1781	1.41
Interaction Mode x Prest. x Inst.	33.3388	4	8.3347	1.28
Total Between	223.0817	17		
Within Groups	4106.9183	631	6.5086	
TOTAL	4330.0000	648		

* Significant beyond .05 level.

Means for Prestige			Means for Instructors		
Normal	Dept. Expert	Natl. Expert	A	B	C
.11	.41	.76	.80	.35	.11

On potency scales, a significant Prestige x Instructor interaction was produced. Instructor A students produced the greatest change when A was a departmental expert, next highest when he was a national expert and least change when he was a normal instructor. All changes were in the direction of a stronger rating for the concept. Instructor B students produced greater change as B went up in prestige levels. B's smallest change, as a normal instructor, was a change toward rating the concept as less strong. In the other two conditions the ratings changed toward the stronger pole. C subjects produced the greatest change when C was a normal instructor, next greatest when he was a national expert. Both of these changes were toward stronger ratings of the concept. When C was a departmental expert the change was smallest and also changed toward a less strong position. The results are presented in Table 30.

Table 30

Analysis of Variance of Difference Scores on Potency Scales
for Concept AUTHORITY

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	13.7316	1	13.7316	1.69
Between Prestige	8.6459	2	4.3230	<1
Between Instructors	9.5029	2	4.7515	<1
Interaction Mode x Prest.	5.0951	2	2.5476	<1
Interaction Mode x Inst.	13.6236	2	6.8118	
Interaction Prest. x Inst.	80.7960	4	20.1990	2.49*
Interaction Mode x Prest. x Inst.	20.3046	4	5.0762	<1
Total Between	151.6997	17		
Within Groups	5115.3003	631	8.1067	
TOTAL	5267.0000	648		

* Significant beyond .05 level.

Means for Prestige and Instructors

	A	B	C
Normal	.27	-.06	.81
Dept. Expert	.72	.73	-.13
Natl. Expert	.65	1.07	.15

d. Concept POWER POLITICS

In none of the three analyses on difference scores for this concept was a significant F produced. These analyses were on evaluative, activity and potency scales.

e. Concept CASTE POWER PYRAMID

The evaluative and activity scales for this concept produced no significant F ratios. On potency scales, a significant Prestige x Instructor interaction was found. Results of the analysis are presented in Table 31

Table 31

Analysis of Variance of Difference Scores on Potency Scales for Concept CASTE POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.7383	1	.7383	<1
Between Prestige	3.3881	2	1.6941	<1
Between Instructors	17.3004	2	8.6502	<1
Interaction Mode x Prest.	7.7471	2	3.8736	<1
Interaction Mode x Inst.	6.8975	2	3.4488	<1
Interaction Prest. x Inst.	210.3724	4	52.5931	4.03**
Interaction Mode x Prest. x Inst.	50.7855	4	13.6964	1.05
Total Between	297.2293	17		
Within Groups	8231.7707	631	13.0456	
TOTAL	8529.0000	648		

** Significant beyond .01 level.

Means for Prestige and Instructors

	A	B	C
Normal	1.04	-.72	.48
Dept. Expert	.03	1.34	-.33
Natl. Expert	.55	.39	.34

The pattern for Instructor A is that the greatest change is produced when he is a normal instructor, the next greatest when he is a national expert and the least change when he is a departmental expert. All changes are toward ratings or stronger. For B, the greatest change is produced when he is a departmental expert. This change is toward a rating of stronger compared with immediate posttest position. The next greatest change is produced when B is a normal instructor, however this change is in the opposite direction. The rating of the concept becomes less strong. The least change for B is when he is a national expert. C gets greatest change when he is a normal instructor. The changes involved when he is a departmental or a national expert are about the same in magnitude and are both changes toward less strong.

e. Concept OLIGARCHICAL POWER PYRAMID

On the evaluative scales analysis a significant difference was found between face-to-face and TV groups. Both groups became more favorable toward the concept but the face-to-face group changed significantly more. The results are given in Table 32.

Table 32

Analysis of Variance of Difference Scores on Evaluative Scales for Concept OLIGARCHICAL POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	225.2229	1	225.2229	4.26*
Between Prestige	8.1201	2	4.0601	<1
Between Instructors	58.2882	2	29.1441	<1
Interaction Mode x Prest.	36.1287	2	18.0644	<1
Interaction Mode x Inst.	238.0765	2	119.0383	2.30
Interaction Prestige x Inst.	432.3767	4	108.0942	2.09
Interaction Mode x Prest. x Inst.	412.2414	4	103.0604	1.99
Total Between	1410.4545	17		
Within Groups	32600.6606	631	51.6651	
TOTAL	34757.0000			

* Significant beyond .05 level.

Means for Mode

TV	F-to-F
1.03	2.29

There was a significant main effect for instructors on the activity scales. Both Instructors A and C produced changes toward less active for the concept with C producing a larger change than A. Instructor B produced the largest change but in a direction of rating the concept more active. Results are given in Table 33.

Table 33

Analysis of Variance of Difference Scores on Activity Scales for Concept OLIGARCHICAL POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	18.3757	1	18.3757	2.25
Between Prestige	7.6022	2	3.8011	<1
Between Instructors	64.5345	2	32.2673	3.95*
Interaction Mode x Prest.	6.1044	2	3.0522	<1
Interaction Mode x Inst.	14.7687	2	7.3844	<1
Interaction Prest. x Inst.	60.0180	4	15.0045	1.84
Interaction Mode x Prest. x Inst.	30.2069	4	7.5517	<1
Total Between	201.6104	17		
Within Groups	5157.3896	631	8.1734	
TOTAL	5359.0000	648		

* Significant beyond .05 level.

Means for Instructors

A	B	C
-.13	.37	-.36

A significant F ratio for the instructor variable was found again on the potency scales. All three instructors produced changes in the same direction--ratings of less strong for the concept. Instructor C produced the largest change followed by B and then by C. Results are given in Table 34.

Table 34

Analysis of Variance of Difference Scores on
Potency Scales for Concept OLIGARCHICAL POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	2.8440	1	2.8440	<1
Between Prestige	15.0306	2	7.5153	<1
Between Instructors	62.7915	2	31.3958	3.04*
Interaction Mode x Prest.	7.7832	2	3.8916	<1
Interaction Mode x Inst.	3.3685	2	1.6843	<1
Interaction Prest. x Inst.	20.3038	4	5.0759	<1
Interaction Mode x Prest x Inst.	89.6363	4	22.4091	2.17
Total Between	201.7579	17		
Within Groups	6525.2421	631	10.3411	
TOTAL	6727.0000	648		

* Significant beyond .05 level.

Means for Instructors

A	B	C
-.32	-.40	-.98

f. Concept DEMOCRATIC POWER PYRAMID

On the evaluative scales, a significant F was obtained for the Prestige x Instructor interaction. All changes were toward a rating of less favorable toward the concept. On the immediate posttest, scores on evaluative scales for this concept were extremely favorable with very little room for change toward more favorability. Analysis is presented as Table 35.

Table 35

Analysis of Variance of Difference Scores on Evaluative Scales for Concept DEMOCRATIC POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.0171	1	.0171	<1
Between Prestige	43.5020	2	21.7510	1.34
Between Instructors	45.5949	2	22.7975	1.41
Interaction Mode x Prest.	58.3039	2	29.1520	1.80
Interaction Mode x Inst.	2.8847	2	1.4424	<1
Interaction Prest. x Inst.	261.9938	4	65.4985	4.04**
Interaction Mode x Prest. x Inst.	14.4856	4	3.6214	<1
Total Between	426.7820	17		
Within Groups	10221.2180	631	16.1984	
TOTAL	10648.0000	648		

** Significant beyond .01 level.

Means for Prestige and Instructors

	A	B	C
Normal	-2.64	-.32	-2.49
Dept. Expert	-1.07	-2.00	-1.27
Natl. Expert	-1.00	-1.09	-1.45

Three significant F ratios were obtained on the analysis of the activity scales for this concept. Changes in all cases were toward rating the concept as less active. In the prestige conditions, the departmental expert condition produced the greatest difference score followed by the normal instructor condition and then by the national expert condition. In the Prestige x Mode interaction, the face-to-face condition produced smaller difference scores as prestige level went up. In the TV condition, the departmental expert condition produced the largest difference score with normal instructor and national expert conditions producing smaller difference scores. The results are given in Table 36.

Table 36

Analysis of Variance of Difference Scores on Activity Scales for Concept DEMOCRATIC POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	2.3241	1	2.3241	<1
Between Prestige	61.5588	2	30.7794	4.97**
Between Instructors	14.0245	2	7.0123	1.13
Interaction Mode x Prest.	52.9481	2	26.4741	4.28*
Interaction Mode x Inst.	.8793	2	.4397	<1
Interaction Prest. x Inst.	71.5803	4	17.8951	2.89*
Interaction Mode x Prest. x Inst.	40.2084	4	10.0521	1.62
Total Between	243.5235	17		
Within Groups	3907.4765	631	6.1925	
TOTAL	4151.0000	648		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Prestige

Normal	-.91
Dept. Expert	-1.07
Natl. Expert	-.40

Means for Mode and Prestige

	TV	F-to-F
Normal	-.57	-1.20
Dept. Expert	-1.40	-.77
Natl. Expert	-.55	-.25

Means for Instructor and Prestige

	A	B	C
Normal	-1.01	-.72	-1.01
Dept. Expert	-.49	-1.88	-.96
Natl. Expert	-.55	-.41	-.24

A significant Mode x Instructor interaction was produced in the analysis on potency scales. As Table 37 shows, all changes with the exception of Instructor B face-to-face are in the direction of rating the concept as less strong. Instructor on B television, however, produces the greatest negative change of any instructor.

Table 37

Analysis of Variance of Difference Score on Potency Scales
for Concept DEMOCRATIC POWER PYRAMID

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	8.6627	1	8.6627	1.93
Between Prestige	5.3898	2	2.6949	<1
Between Instructors	7.1069	2	3.5535	<1
Interaction Mode x Prest.	26.8621	2	13.4311	2.98
Interaction Mode x Inst.	32.3844	2	16.1922	3.60*
Interaction Prest. x Inst.	8.9331	4	2.2333	<1
Interaction Mode x Prest. x Inst.	9.1583	4	2.2896	<1
Total Between	98.4973	17		
Within Groups	2837.5027	631	4.4968	
TOTAL	2936.0000	648		

* Significant beyond .05 level.

Means for Mode and Instructors

	TV	F-to-F
A	-.52	-.61
B	-.82	.03
C	-.58	-.64

g. Ratings of experimental instructors on delayed posttest

Significant differences were found in all analyses concerning ratings of the experimental instructor except for the scale interesting-dull. For the evaluative scales a significant difference appeared in difference scores betwean prestige conditions. A significant Prestige x Mode interaction was also produced. As Table 38 shows, the means involved show a consistent direction--toward lesser favorability to the instructor. There is greater change toward less favorability when instructors appeared as national experts than when they appeared as departmental experts. However, the interaction significance shows that the greatest change toward lesser favorability occurs when instructors appear as national experts in a face-to-face situation. In the TV situation, appearing as a departmental expert produces greater change than appearing as a national expert.

Table 38

Analysis of Variance of Difference Scores for Evaluative Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	8.7854	1	8.7854	<1
Between Prestige	57.8921	1	57.8921	5.81*
Between Instructors	29.2233	2	14.6117	1.50
Interaction Mode x Prest.	73.8965	1	73.8965	7.41**
Interaction Mode x Inst.	40.0124	2	20.0062	2.01
Interaction Prest. x Inst.	13.3379	2	6.6690	<1
Interaction Mode x Prest. x Inst.	44.4925	2	22.2463	2.23
Total Between	267.6401	11		
Within Groups	4088.3599	410	9.9716	
TOTAL	43.56.0000	421		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Prestige

Dept. Expert	-.97
Natl. Expert	-1.72

Means for Mode and Prestige

	TV	F-to-F
Dept. Expert	-1.27	-.70
Natl. Expert	-1.13	-2.27

The same two significances which appeared in the evaluative analysis also appeared in the analysis of the activity scales. As Table 39 shows, the same pattern is also present. A greater change toward a rating of less active is produced when students receive the lesson from instructors appearing as national experts than when students receive instruction from departmental experts. In the Prestige x Mode interaction, the greatest change is produced by national experts appearing face-to-face. Departmental experts appearing face-to-face produce a change in the opposite direction--toward ratings of more active. In the TV situation, departmental experts produce greater change than national experts toward a rating of less active.

Table 39

Analysis of Variance of Difference Scores for Activity Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	19.3425	1	19.3425	2.98
Between Prestige	40.1414	2	40.1414	6.17*
Between Instructors	28.9587	2	14.4794	2.23
Interaction Mode x Prest.	51.1868	1	51.1868	7.87**
Interaction Mode x Inst.	.1901	2	.0951	<1
Interaction Prest. x Inst.	2.8052	2	1.4026	<1
Interaction Mode x Prest. x Inst.	2.9734	2	1.4867	<1
Total Between	145.5981	11		
Within Groups	2665.4019	410	6.5010	
TOTAL	2811.0000	422		

* Significant beyond the .05 level.
** Significant beyond the .01 level.

Means for Prestige

Dept. Expert	-.03
Natl. Expert	-.67

Means for Mode and Prestige

	TV	F-to-F
Dept. Expert	-.20	.11
Natl. Expert	-.08	-1.21

On the potency scales, the same significances were produced, however the pattern of means in the interaction was different from the previous two analysis. Again, as in the analyses for the evaluative and activity scales there was a prestige difference with national experts producing greater change toward a rating of less strong for the instructor than departmental experts. National experts appearing face-to-face produced the greatest change toward ratings of less strength. This was also true of national experts on TV in this analysis. Results are presented in Table 40.

Table 40

Analysis of Variance of Difference Scores for Potency Scales on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	.3860	1	.3860	<1
Between Prestige	67.6559	1	67.6559	11.88**
Between Instructors	5.2252	2	2.6126	<1
Interaction Mode x Prest.	25.9350	1	25.9350	4.55*
Interaction Mode x Inst.	13.0091	2	6.5046	1.14
Interaction Prest. x Inst.	4.6040	2	2.3020	<1
Interaction Mode x Prest. x Inst.	1.6996	2	.8498	<1
Total Between	118.5148	11		
Within Groups	2334.4852	410	5.6939	
TOTAL	2453.0000	421		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Prestige

Dept. Expert	-.22
Natl. Expert	-1.02

Means for Mode and Prestige

	TV	F-to-F
Dept. Expert	-.44	-.03
Natl. Expert	-.74	-1.28

The scale clear-hazy produced three significant F ratios. In addition to the prestige difference and significant Mode x Prestige interaction, which was found in the other analyses also, an instructor difference was produced. Instructor A had the smallest change followed by B and then by C. In this case, the larger the difference score, the less clear and the more hazy is the rating of the instructor. The national expert condition produced larger difference scores than the departmental expert. The direction of both difference scores was toward a position of less clear. In the interaction of mode and prestige, national experts appearing face-to-face produced the greatest change toward a less clear rating. In the TV condition the difference score for the departmental experts was larger than the national experts. Results are given in Table 41.

Table 41

Analysis of Variance of Difference Scores for Scale Clear-Hazy on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	7.0368	1	7.0368	3.05
Between Prestige	14.0838	1	14.0838	6.10*
Between Instructors	25.3097	2	12.6548	5.48*
Interaction Mode x Prest.	16.7632	1	16.7632	7.26**
Interaction Mode x Inst.	1.3055	2	.6528	<1
Interaction Prest. x Inst.	.0679	2	.0340	<1
Interaction Mode x Prest. x Inst.	8.6620	2	4.3310	1.88
Total Between	73.2289	11		
Within Groups	946.7711	410	2.3092	
TOTAL	1020.0000	421		

* Significant beyond .05 level.
** Significant beyond .01 level.

Means for Prestige	
Dept. Expert	-.48
Natl. Expert	-.86

Means for Instructors	
A	-.42
B	-.58
C	-1.03

Means for Mode and Prestige	TV	F-to-F
Dept. Expert	-.57	-.40
Natl. Expert	-.50	-1.19

On the expert-inexpert scale, the following significant F ratios were found--between prestige conditions, among instructors, and an interaction between mode and instructor. Again, as in the prior analyses, the national experts produced the greater change toward a rating of less expert in comparison with departmental experts. Instructor C produced the greatest change toward less expert followed by B and then by C. In the face-to-face condition, greater change toward a rating of less expert was found for Instructor C, followed by B and then A with least change. In the TV condition, B produced the greatest change followed by C and then by A. Results are given in Table 42.

Table 42

Analysis of Variance of Difference Scores for Scale
Expert-Inexpert on Rating of Experimental Instructor

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Modes	5.3213	1	5.3213	3.08
Between Prestige	7.5857	1	7.5857	4.39*
Between Instructors	20.6738	2	10.3369	5.99*
Interaction Mode x Prest.	4.2256	1	4.2256	2.45
Interaction Mode x Inst.	20.5785	2	10.2893	5.96*
Interaction Prest. x Inst.	.7693	2	.3847	<1
Interaction Mode x Prest. x Inst.	3.7726	2	1.8863	<1
Total Between	62.9268	11		
Within Groups	708.0732	410	1.7270	
TOTAL	771.0000	421		

* Significant beyond .05 level.

Means for Prestige	
Dept. Expert	-.31
Natl. Expert	-.60

Means for Instructors	
A	-.23
B	-.37
C	-.77

Means for Mode and Instructors	TV	F-to-F
A	-.24	-.23
B	-.48	-.28
C	-.32	-1.19

h. Delayed posttest on information gain scores

Analysis of the 15 item information gain scores produced a significant second order interaction. None of the simple interactions tested against the triple interaction was significant. The pooled error term was 17.8840 with 12 degrees of freedom. None of the main effects were significant when tested against this term.

5. Prior instructional television exposure.

It was hoped that sufficient numbers of subjects who had taken one or more quarters of the Social Science course by television would be available in our experimental groups so that each cell of the analysis of variance design could be split into groups with prior instructional TV experience and without prior experience. Unfortunately numbers were too small in each cell to warrant analysis. A total of 109 subjects who had taken Social Science by closed-circuit subjects were included in our study. Of these, 53 were in experimental sections which received the lesson over TV, 50 were in the face-to-face experimental sections and 6 were in the control group.

It was decided to run "t" tests between previously exposed and not previously exposed subjects for the TV experimental group, the face-to-face experimental group and the control group. Results of this analysis are given in Table 43.

Table 43

Results of "t" Tests between Prior Instructional TV and No Instructional TV Subjects for TV Experimental Group, Face-to-Face Experimental Group and Control Group.

Concept and Scale	"t" for F-to-F Group (357 d.f.)	"t" for TV Group (403 d.f.)	"t" for Controls (74 d.f.)
TEACHING BY TELEVISION			
Evaluation	1.239	3.254**	.550
Activity	1.394	.515	.382
Potency	2.163*	4.112**	1.392
Interesting-dull	.477	2.104*	.124
Clear-Hazy	1.330	2.301*	.096
FACE-TO-FACE TEACHING			
Evaluation	.459	.648	.135
Activity	.306	1.013	.958
Potency	3.756**	3.240**	.203
Interesting-dull	.848	1.261	.741
Clear-hazy	.103	.188	.477
AUTHORITY			
Evaluation	.065	2.483*	.947
Activity	.026	.289	.010
Potency	.176	.162	.301
POWER POLITICS			
Evaluation	.207	.267	1.692
Activity	1.341	.646	.031
Potency	.646	.520	.957
CASTE POWER PYRAMID			
Evaluation	.576	1.359	.284
Activity	.555	1.204	.512
Potency	.229	.759	.902
OLIGARCHICAL POWER PYRAMID			
Evaluation	.676	1.037	1.219
Activity	.843	.708	.734
Potency	.564	1.145	.623
DEMOCRATIC POWER PYRAMID			
Evaluation	1.039	.430	.433
Activity	1.020	.071	.070
Potency	.350	.227	.081
15 ITEM INFORMATION GAIN TEST	.498	.662	1.490
RATING OF EXPERIMENTAL INSTRUCTOR (No control group tests used. 263 d.f. for face-to-face group, 234 d.f. for TV group)			
Evaluation	1.121	1.260	
Activity	.499	.312	
Potency	1.090	.981	
Interesting-dull	1.725	.585	
Clear-hazy	.110	.417	
Expert-inexpert	.639	2.573*	

* Significant beyond .05 level.
** Significant beyond .01 level.

A look at the pattern of significant differences listed in Table 43 reveals a cluster for the concept TEACHING BY TELEVISION. Further, all of the significant differences for this concept are found in the comparisons with the television group. The direction of the significant differences for this concept reveals that in each instance those with prior instructional television experience are more favorable. They rate television teaching as more favorable, stronger, more interesting and clearer compared with the group which had no television experience.

Although the differences are not significant, the comparisons of prior TV persons with no prior TV persons in the face-to-face group show that the prior TV persons rate the concept more favorable, stronger, more active, more interesting and clearer than the no prior TV group.

There are very few other significant differences. In both the face-to-face and the TV groups, the no prior TV group rates FACE-TO-FACE TEACHING as stronger compared with the prior TV group. It is interesting to note here that taking only direction into account, for both the TV and face-to-face groups, the persons with no prior TV experience rate the concept FACE-TO-FACE TEACHING more favorably, more active, stronger, more interesting and clearer compared with the prior TV persons, the exact opposite from what was seen with the concept TEACHING BY TELEVISION.

6. Intelligence Scores and Learning.

The ACE linguistic component scores were used as an index of intelligence. Subjects were divided both in the TV and face-to-face groups into three groupings of high, medium and low L scores. Mean scores were computed on learning items for these groups. The means are given in Table 44.

Table 44

Mean Scores for High, Medium and Low L Scores
for TV and Face-to-Face Groups on Information Gain Test

	Intelligence Score Groupings		
	Low	Medium	High
Face-to-Face	8.48	9.13	10.43
Television	7.91	8.74	9.99

Inspection of Table 44 shows that as intelligence level goes up, information test scores go up. Also television scores are lower than face-to-face scores (as revealed by the mode difference obtained in the analysis of variance). But there is no reversal that one would expect for low intelligence score groups based on the Army study cited previously (14). The correlation between L scores and information test scores for the face-to-face group was .33 while the correlation for the television group was .30. There is no significant difference between these correlations.

7. Incidental findings.

Subject estimates of how much each watched television while on the campus and while at home were tabulated. The tabulations are given as Table 45. It is interesting to note that in home viewing these students watch TV for less than figures cited for the general population.

Table 45
Reported Campus and Home Viewing by Experimental Subjects

Campus Viewing

	n	%
No hours a week	462	55.1%
1-5 hours a week	295	35.2%
6-10 hours a week	60	7.1%
11 or more hours	22	2.6%
Totals	839	100%

Home Viewing

	n	%
No hours a week	41	5.1%
1-5 hours a week	234	29.2%
6-10 hours a week	261	32.5%
11-15 hours a week	133	16.6%
16-20 hours a week	71	8.9%
21-25 hours a week	27	3.4%
26-30 hours a week	17	2.1%
31 or more hours	18	2.2%
Totals	802	100%

B. The Advertising Project

During this quarter long course, eight regular assignements were given. One of these, a problem in copywriting, was given more weight by the instructor toward the final grade. Analysis of variance was used to test for differences on these eight assignments. No significant differences were found for seven of the assignments. On the eighth assignment, the problem in copywriting, a significant F was produced. The analysis is presented as Table 46. Scores are based on Scores of 4 for an A, 3 for a B, 2 for a C and 1 for a D.

Table 46

Analysis of Variance for Copywriting Grades

Source of Variation	Sum of Swuares	d.f.	Mean Square	F
Between Groups	9.4712	2	4.7356	3.22*
Within Groups	129.3174	88	1.4695	
TOTAL	138.7886	90		

* Significant beyond .05 level.

Mean Grades

Face-to-face	2.78
In-studio	2.30
Television	2.01

The contrast which produces the significant F is the comparison between the face-to-face and television groups. There is slightly more than three-quarters of a letter grade separating these two groups. A "t" test produced a value of 2.52 which at 62 degrees of freedom is significant beyond the .01 level. There were no differences between face-to-face and in-studio, and between in-studio and TV.

Two specially constructed quizzes were given during the course. Both of these quizzes produced significant differences. These analyses are presented as Tables 47 and 48.

Table 47

Analysis of Variance for Quiz A

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Groups	31.249	2	15.624	3.27*
Within Groups	391.763	82	4.778	
TOTAL	423.012	84		

* Significant beyond .05 level.

Means for Quiz A (Based on 10 items)

Face-to-face	4.36
In-studio	3.95
Television	2.92

Table 48

Analysis of Variance for Quiz B

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Groups	11.918	2	5.959	4.16*
Within Groups	111.663	78	1.431	
TOTAL	123.581	80		

* Significant beyond .05 level.

Means for Quiz B (Based on 8 items)

Face-to-face	5.44
In-studio	4.57
Television	5.37

For Quiz A, Table 47, the face-to-face group is superior. The contrast between face-to-face and television produced a "t" of 2.59 which at 61 degrees of freedom is significant beyond the .05 level. The other two contrasts did not produce significant "t"s. For Quiz B, Table 48, face-to-face again gets the highest score. However, television does almost as well in this quiz. The significant contrast is between face-to-face and in-studio and between television and in-studio. The first comparison produced a "t" of 2.87, significant beyond the .05 level at 60 degrees of freedom. The latter comparison produced a "t" of 2.32, significant beyond the .05 level at 40 degrees of freedom.

All regular examinations were analyzed. The mid-term examination did not produce differences. However, on the final examination a significant difference occurred. Results are given in Table 49.

Table 49

Analysis of Variance of Final Examination Grades

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Groups	10.73	2	5.215	6.10**
Within Groups	79.53	93	.855	
TOTAL	89.96	95		

** Significant beyond .01 level.

Mean Grades for Final Examination

Face-to-face	2.79
In-studio	2.46
Television	2.01

The contrasts between face-to-face and in-studio and between in-studio and television were not significant by "t" tests. The significant F is produced by the difference between face-to-face and television groups. The "t" obtained in this comparison was 3.42 which at 68 degrees of freedom is significant beyond the .01 level.

Final grades for the course were analyzed and a significant difference was found. The results are presented as Table 50.

Table 50

Analysis of Variance of Final Term Grades

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Groups	4.3435	2	2.1717	4.56**
Within Groups	44.2652	93	.4760	
TOTAL	48.6087	95		

** Significant beyond .01 level.

Mean Final Grades

Face-to-face	2.79
In-studio	2.54
Television	2.22

Again, it is the contrast between face-to-face and television groups which is significant. The obtained "t" was 3.73 which at 68 degrees of freedom is significant beyond the .001 level. The other two comparisons were not significant. The difference between face-to-face and television grades is about six-tenths of a grade point.

In testing for attitude differences, two of the concepts used did not produce significant differences on any of the scales tested. These concepts were THE ADVERTISING BUSINESS and A CAREER IN ADVERTISING. All subjects were highly favorable toward both concepts. On the concept TEACHING BY TELEVISION, six of the seven scales tested produced no significant differences. On the scale clear-hazy a significant F was obtained. The results are presented in Table 51.

Table 51

Analysis of Variance on Scale Clear-Hazy
for Concept TEACHING BY TELEVISION

Source of Variation	Sum of Squares	d.f.	Mean Square	F
Between Groups	19.027	2	9.514	4.78*
Within Groups	151.403	76	1.992	
TOTAL	170.430	78		

* Significant beyond .05 level.

Means	
Face-to-face	3.51
In-studio	3.52
Television	2.37

The lower the score in this analysis, the higher the rating is toward the clear pole of the scale. Television students think television teaching is much clearer than either face-to-face or in-studio groups. All groups, however, rate the concept as clear (4 being neutral).

IV. DISCUSSION AND CONCLUSIONS

At the outset of this study, it was stated that the main intent of the Social Science Project was to explore the effect of several variables--mode and prestige level--on attitudes. These attitudes were of three kinds--toward the concept of teaching by television or by face-to-face, toward course related concepts, and toward the instructor. Our clearest findings from the study, however, are in the area of information gain.

In contradiction to the overwhelming majority of television studies, we found that the mode of presentation significantly affects learning. Further, we found that television taught students do significantly poorer than conventionally taught students. Before discussing possible reasons for this finding, however, we should turn our attention to the magnitude of this difference.

Because of the large numbers involved perhaps, a difference between the TV and the face-to-face groups of about one-half an item on a 15 item test produced a statistically significant difference. One can question the social significance of such a small difference and can claim that such a statistical difference makes no case for utilizing or not utilizing television. To this sort of argument, one answer is that the half item difference appeared on a test in which the message was less than a class period long. If a series of such tests are given during the course of a school term, then television students may suffer. A better argument is to look at the results of the Advertising Project. Here, too, television students did poorer than face-to-face students. But the social significance is obvious--there was a final grade difference which cannot be accounted for on the grounds of differing levels of ability, at least.

Why did such a finding occur in the absence of such results in a multitude of other studies? Several answers are possible here. One is an answer from the standpoint of probability. Our findings may be the rare instance(5% of the time if we adopt this as the significance level) when an extreme finding occurs in the case where there is truly no difference between TV and face-to-face. This is the Type I error that statisticians talk about. Another answer is that the information test used was a better constructed test than those which have been uesed heretofore. Although a great deal of time and effort went into the construction of the test, we still cannot say that others have not constructed just as good or better tests.

One of the plausible answers is that TV students did poorer because of the use of methods tied to conventional type teaching in the television situation . It is true that in the zeal to control as many extraneous factors as possible, variation in presentation to adapt the lesson to TV was not done. However, this answer is partially voided by the Advertising Project which used techniques especially suited for television, and still came out with TV students doing poorer than their face-to-face counterparts.

We cannot offer a clear-cut answer here. What can be done is replication. In a sense the Social Science Project was a unique experiment even though ostensibly it was concerned with the same kinds of variables with which other TV research has been involved. Uniqueness in this situation is not one to brag about. As Fisher, the eminent statistician once put it, "In order to assert that a natural phenomenon is experimentally demonstrable we need, not an isolated record, but a reliable method of procedure."

What can we say about effect on attitudes? A neat and orderly pattern is hard to find. It is obvious that the experimental message was successful in changing attitudes toward almost all of the concepts presented. A glance at Table 3 in which experimental groups versus control group comparisons are made reveals that the differences lie mainly with those concepts talked about in the message. However, in comparisons among our various conditions, such clear-cut evidence does not emerge.

Particularly for the analyses with the evaluative scales, scales which we think cover the area called attitudes, differential effect is not present as a function of differing experimental conditions. Most of the effect is evinced in the two other dimensions of meaning found by work with the Semantic Differential--the factors of activity and potency. Evaluative change did take place in view of the number of significant differences between experimental and control groups on evaluative scales, but change in attitude was not differentially affected by our experimental conditions.

The variable of perceived prestige was introduced to see if we could not get the same kinds of findings with television that Hovland and others have found using written and aural messages. Because we were working within the framework of an ongoing course and were using instructors for this course, we could not vary prestige as much as would have been desirable from an experimental standpoint. We did not (at least we think we did not) have a condition of low prestige or credibility. We assumed also that three degrees of expertness would be recognized by subjects as distinct steps. There is some reason to believe that the departmental expert and the national expert conditions were not sufficiently far apart. From some of the analyses, there is a suspicion that the departmental expert was at least on a par or exceeded the perceived expertness of the national expert.

However, this is partially refuted by the main effects significances involving the prestige variable when the instructor himself is rated. Here the instructor is seen as stronger and clearer when he is a national expert than when he is a departmental expert.

The interesting part of the analyses on attitude is the number of significant interactions which appeared. However, in the immediate posttest, not one instance of a mode-instructor interaction appeared. All of the significant interactions were a function of prestige and mode or prestige and instructor. This absence of a mode-instructor interaction is indirect evidence which would tend to refute the claim of some that there are "television teachers" and "classroom teachers" and that these are not interchangeable.

We have not been able to throw much light on the question of acceptance of television. The concept TEACHING BY TELEVISION produced a significant main effect only for the scale interesting-dull. Oddly enough, those who received the lecture in the face-to-face situation rated TV teaching as more interesting in comparison with TV students. The significant mode-prestige interactions in connection with this concept are interesting. In each case--for activity, potency, and the scale interesting-dull--face-to-face students gave the highest ratings when thay received the lecture from the normal instructor and the lowest ratings when they received the lecture from the national expert. One could interpret this to mean that the prestige announcement had an effect in that if the student were getting a renowned expert there would be no reason for him to rate TV teaching highly. The opposite pattern should hold true for the TV taught students but only in the findings for the scale interesting-dull does this hold. Here students rate TV teaching as more interesting as prestige level goes up.

On ratings for experimental instructors, the instructor main effect shows again and again as one might predict. Two of our instructors were quite close to each other in being rated along various dimensions although one was consistently rated higher than the other, but the third instructor was rated the lowest consistently. The differences in his ratings and the ratings for the other two instructors were of some magnitude. Thus we had an instructor difference such that the three instructors cannot be considered as replications in our experiment. Some internal crosscheck on instructor ratings is available in the study in the information gain test. There, not only was a mode difference found but also an instructor difference. The amount learned from each instructor followed the same ordering of instructors as the ratings on the instructors themselves.

The delayed posttest difference scores did not present an interpretable pattern. One of the difficulties in delayed posttesting was that although the experimental message was given only once, the subject matter of the course was such that discussion of some of the points in the experimental message was inevitable during the six weeks which elapsed.

We could not find evidence for a novelty effect. Rather we found that persons who had been previously exposed were significantly more favorable toward teaching by television than those who were experiencing it for the first time. This is some evidence to support the point of view that exposure creates favorable attitudes. Prior exposure and higher favorability toward television teaching has no effect however on differential changes in attitudes toward concepts about the subject matter or on amount learned.

There is no support in our study of low ability students learning better by television than by face-to-face. Again, we are not doing replication but a variant of the procedure which Kanner (14) undertook. Our low ability subjects are low with respect to the university population. They probably are not comparable to the low ability subject of Kanner's study. Although several other studies have found no evidence to support Kanner's finding, these too are dealing mainly with college enrolled samples.

The Advertising Project presents an interesting case for discussion. Here is a course which is "chock full" of visuals. We assumed, probably naively, that visuals on TV were better than no visuals. We went in with no knowledge of the optimum number and types of visuals in an instructional television setting. We felt that the loss of color in transmitting would hinder the maximum efficiency of the visual. But, without further study, we cannot attribute our findings of TV doing significantly poorer to visual techniques. A more reasonable explanation is one based on differing attention level among the groups used. At times, the receiving room group was not paying attention, as evinced by newspapers being read in class, students leaving before the class period was up, and other such activities.

The analyses done with the Advertising Project seem to show that there might have been something other than inattention or mode of presentation operating. For example, seven out of the eight regular assignments produced no significant differences. There was no difference on the midterm examination. The two special quizzes in which significant differences were found were not counted towards a final grade. Only one of the regular assignments (this carrying more weight for the final grade to be sure) and the final examination produced significant differences. A direction was not present either so that there wasn't a cumulative effect. Tabulating which group got higher scores without regard to significance produce just as many high scores for TV as for face-to-face. This would suggest that there might have been an unconscious instructor bias operating. That is, he saw the face-to-face students on intimate terms, got to identify persons in his class, talked with them right after class whereas he rarely saw the television class in person.

We can summarize the two projects in this fashion:

1. Television students do poorer than face-to-face or conventionally taught students on learning. This was true in the one-shot Social Science Project and in the term long Advertising Project.
2. Television taught studentschange in their course related attitudes but this change is no greater in magnitude than conventionally taught students.
3. The findings on prestige effects in this study are mixed. This is partially the result perhaps of non-equal steps between increments of experimenter assigned prestige.
4. No novelty effect seems to be operating for first instructional TV exposure subjects when compared with subjects who have had a previous course in the same department over television. Prior TV students are significantly more favorable towards teaching by television than first exposure students.
5. No support is found for the thesis that low ability students do better when taught by TV than when taught in a conventional situation.
6. There is very little sheer mode effect (television vs face-to-face). Mode effects are significant in interaction with other variables, in this study primarily with the variable of perceived prestige.

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APPENDIX A

INSTRUCTOR SCRIPT FOR THE EXPERIMENT

POLITICAL POWER AND POWER STRUCTURES

WHEN AMERICANS HEAR THE WORD 'POWER', THEY RESPOND UNFAVORABLY. THEY SAY: POWER IS BAD; POWER IS UNDEMOCRATIC; POWER IS THE RULE-OF-THUMB OF DICTATORS, TYRANTS, RUTHLESS TYCOONS AND UNFAIR COMPETITORS.

ACCORDING TO THIS FALSE STEREOTYPE, POWER POLITICS IS A SELFISH STRUGGLE FOR ADVANTAGE, NOT ENGAGED IN BY DECENT PEOPLE AND ENLIGHTENED GOVERNMENTS.

AMERICANS WILL SWEAR BY THE POWER ADVANTAGES OF SUCCESSFUL COMPETITION -- AS LONG AS THE WORD 'COMPETITION' IS USED -- BUT THEY DISTRUST POWER POLITICS AS ALIEN TO THE AMERICAN VALUE SYSTEM.

LET US RID OURSELVES OF THE NAIVE NOTION THAT POWER IS SOMETHING TO BE FEARED OR CONDEMNED. ACTUALLY, POWER IS NOT MORAL. IT IS NOT IMMORAL. IT IS NOT GOOD. IT IS NOT BAD. POWER IS LIKE FIRE OR ATOMIC ENERGY; ITS BADNESS OR GOODNESS IS DETERMINED BY ITS USERS, NOT BY POWER ITSELF.

POWER IS INHERENT IN ALL SOCIAL RELATIONS. WITHOUT SOCIAL POWER, THERE COULD BE NO ORGANIZED SOCIAL ENDEAVOR. POWER SIMPLY MEANS THE CAPACITY IN ANY SOCIAL RELATIONSHIP TO CONTROL THE BEHAVIOR OF OTHER PERSONS. CONTROL ALWAYS INVOLVES POWER, WHETHER IT IS INDIRECTLY APPLIED BY PERSUASION, FOR EXAMPLE, OR DIRECTLY APPLIED BY FORCE OR COMMAND.

THERE ARE TWO THINGS TO REMEMBER IN DISCUSSING POWER: FIRST, POWER IS THE CAPACITY TO CONTROL THE ACTIONS OF OTHER PEOPLE; SECOND, WE MUST REMEMBER THAT IF SOMEONE IS TO MAKE EFFECTIVE POWER ATTEMPTS, HIS ATTEMPTS MUST BE CONSCIOUSLY OR UNCONSCIOUSLY ACCEPTED BY THOSE HE IS ATTEMPTING

TO CONTROL. FOR AN EXAMPLE OF THE FIRST, I MAY HAVE THE POWER OVER YOU BECAUSE OF MY STATUS AS A PROFESSOR. IN A DIFFERENT SITUATION YOU MIGHT HAVE POWER OVER ME BECAUSE I STRONGLY BELIEVE IN YOUR RELIGIOUS TEACHINGS. AGAIN, WE BOTH MIGHT BE SUBJECT TO THE POWER OF A THIRD PERSON: FOR INSTANCE, WHO COULD DENY THAT ELVIS PRESLEY EXERTS POWER OVER SOME OF US?

IN THE EXAMPLES JUST CITED, OBSERVE THAT NO POWER IS EXERTED UNLESS ACCEPTANCE IS PRESENT. YOU MUST ACCEPT MY PROFESSORIAL POWER, OR I MUST ACCEPT YOUR RELIGIOUS POWER, OR WE MUST ACCEPT WHATEVER IT IS THAT ELVIS HAS OR NO POWER IS EXERTED AT ALL.

AMERICANS GENERALLY THINK OF POWER AS SOMETHING ONLY THE GOVERNMENT HAS. THEY THINK THAT THIS GOVERNMENTAL POWER IS THE POWER MOST GREATLY TO BE FEARED, AND THAT IT MUST BE MOST CAREFULLY LIMITED AND RESTAINED. HOWEVER, AS WE HAVE SEEN, POWER TAKES MANY SHAPES AND FORMS. ACTUALLY, THE SOCIAL POWER EXERCISED BY NON-GOVERNMENTAL SOCIAL ORGANIZATIONS MAY BE GREATER THAN GOVERNMENTAL POWER. NON-GOVERNMENTAL POWER MAY BE JUST AS RESTRICTIVE OF INDIVIDUAL FREEDOM, IF NOT MORE SO.

LET US NOW LOOK AT POLITICAL POWER, AS SUCH. ONLY GOVERNMENT HAS THE ULTIMATE AUTHORITY, AS WELL AS THE POWER, TO USE ITS RESOURCES TO END CONFLICTS BETWEEN PERSONS OR GROUPS IN SOCIETY AT LARGE. ONLY GOVERNMENT MAY PROPERLY BRING ORGANIZED FORCE TO BEAR ON THE WHOLE COMMUNITY. THIS POTENTIAL TO USE FORCE ON THE WHOLE SOCIETY IS PRESENT FOR ALL TYPES OF GOVERNMENT.

REMEMBER THAT ONLY GOVERNMENT HAS THE ULTIMATE CAPACITY TO USE FORCE. THIS IS QUITE DIFFERENT FROM SAYING THAT ONLY GOVERNMENT MAY USE FORCE AT ALL. FORCE OR COERCION IS NOT LIMITED TO GOVERNMENTS ALONE. A PARENT SPANKING HIS CHILD IS USING FORCE. THE PARENT IS NOT EXERCISING POLITICAL

POWER BUT IS EMPLOYING SOCIAL POWER IMPLICIT IN HIS STATUS WITHIN THE FAMILY. BUT IF THE PARENT SHOULD INJURE THE CHILD AND THE NEIGHBORS SHOULD LODGE AN OFFICIAL COMPLAINT, THEN THE AGENTS OF GOVERNMENT WOULD INTERVENE WITH THEIR POLITICAL POWER TO END THE DIFFICULTY. THE POINT TO BE MADE HERE IS THAT ONLY POLITICAL POWER EXERCISED THROUGH LEGAL CHANNELS CAN RESOLVE CONFLICTS WHICH ARISE WHEN OTHER PERSONS OR INSTITUTIONS OVERSTEP THEIR POWER BOUNDS AS DEFINED BY LAW. THUS, ONE OF THE THINGS THAT GOVERNMENT DOES IS TO KEEP THE MANY CONCENTRATIONS OF SOCIAL POWER IN BALANCE.

OF COURSE, THIS IS NOT THE WHOLE STORY. GOVERNMENT ITSELF IS A PRODUCT OF THE MYTHS AND NORMS OF SOCIETY. IT IS SUBJECT TO THE STRESSES AND STRAINS OF ALL THE OTHER CONCENTRAIONS OF POWER. AT THE SAME TIME THAT GOVERNMENT IS THE SUPREME AGENT OF FORCE IN BEHALF OF THE PRESERVATION OF SOCIETY, GOVERNMENT IS A REFLECTION OF THE EXISTING POWER RELATIONSHIPS OF SOCIETY.

BECAUSE GOVERNMENT IS THE SUPREME AGENT OF FORCE, MANY POWER INTERESTS SEEK TO MAKE THE GOVERNMENT THEIR ALLY. YOU MAY RECALL THE RELATIONSHIP OF THE CHURCH TO GOVERNMENT IN MEDIEVAL EUROPE, OR THE RELATION OF THE FRENCH MIDDLE CLASS TO THE STATE AFTER THE FRENCH REVOLUTION OF 1789. IN ENGLAND, THERE WAS THE TIEUP OF THE COMMERCIAL AND BUSINESS INTERESTS WITH THE STATE AT THE DAWN OF THE INDUSTRIAL REVOLUTION.

LET US COMPARE POWER WITH AUTHORITY. THERE IS A BASIC DISTINCTION. POWER IS THE CAPACITY TO DEMAND COMPLIANCE; AUTHORITY IS THE RIGHT TO GUIDE OR LEAD OTHERS. AUTHORITY IS OFFICIAL, FORMAL AND LEGITIMATE; IT

FLOWS AUTOMATICALLY FROM AN OFFICIALLY RECOGNIZED POSITION. POWER DOES NOT AUTOMATICALLY INVOLVE SUCH OFFICIAL RIGHTS; BY ITSELF IT ENTAILS NO FORMAL OFFICE, NO OFFICIAL SANCTION, NO LEGITIMACY. WE HAVE ONLY TO THINK OF THE POLITICAL BOSS BEHIND THE SCENES PULLING STRINGS -- EXERCISING POWER, AS IT WERE -- WHILE SOMEONE ELSE OCCUPIES THE OFFICIAL POSITIONS. TO TAKE A NON-GOVERNMENTAL EXAMPLE, THINK OF A FRATERNITY. THE PRESIDENT MAY OR MAY NOT BE THE ONE WHO REALLY EXACTS COMPLIANCE FROM THE MEMBERS. PERHAPS THE ONE WHO EXERCISES THE POWER IS A MEMBER WITHOUT OFFICIAL RANK OR STANDING. IN THIS CASE, THE PRESIDENT OF THE FRATERNITY HAS THE AUTHORITY, WHILE THE OTHER MEMBER HAS THE POWER. OF COURSE, IT IS TRUE THAT POWER AND AUTHORITY OFTEN APPEAR TOGETHER IN THE SAME HANDS. HOWEVER, OUR POINT IS: POWER AND AUTHORITY ARE NOT NECESSARILY FOUND IN THE SAME HANDS.

TO FIND OUT THE WORKINGS OF ANY SOCIAL ORGANIZATION IT IS ESSENTIAL TO KNOW WHO EXERCIES POWER. IT IS NOT ALWAYS NECESSARY TO KNOW WHO IS OFFICIALLY RECOGNIZED IN THE CONSTITUTION OR BY-LAWS. POWER IS ALWAYS REALISTIC, TANGIBLE, EFFECTIVE; WHILE AUTHORITY MAY BE SIMPLY FORMALISTIC AND NOT REFLECT THE REAL SITUATION AT ALL. IT OFTEN HAPPENS THAT POWER IS EXERCISED WITH NO AUTHORITY UNDERLYING IT, JUST AS AUTHORITY OFTEN LOOKS GOOD THOUGH NO ACTUAL POWER BACKS IT UP. THE BEST WAY TO GET AT SOME IDEA OF POWER RELATIONSHIPS IS TO STUDY THE BEHAVIOR OF PEOPLE, TO LDDK AT SOCIAL RELATIONSHIPS.

EXAMINING GOVERNMENT IN THIS LIGHT, IT BECOMES APPARENT THAT IT IS NOT ENOUGH TO KNOW WHICH MAN OCCUPIES WHICH OFFICE AND WHAT THE CONSTITUTION OR LAWS HAVE TO SAY ABOUT HIS AUTHORITY. FOR EXAMPLE, THE SOVIET CONSTITUTION STATES THAT THE NATIONAL LEGISLATURE, THE SUPREME SOVIET, IS THE HIGHEST LAW-MAKING AUTHORITY IN THE COUNTRY. IN FACT, THE REAL POWER IN THE SOVIET SYSTEM IS NOT A GOVERNMENTAL ORGAN AT ALL -- IT IS THE ELEVEN-MAN PRESIDIUM OF THE GENERAL COMMITTEE OF THE COMMUNIST PARTY.

IN THE SPECIFIC POWER RELATIONS CHARACTERISTIC OF PARTICULAR SOCIETIES, THERE IS AN IMPRESSIVE PATTERN OF UNIFORMITIES. THIS IS OFTEN HIDDEN BY THE MANY FORMS THAT SOCIAL POWER TAKES, THE NUMEROUS CONFLICTS ARISING WITHIN AND BETWEEN COMPLEXES AND THE CHANGES ALWAYS OCCURING AMONG POWER ADJUSTMENTS. NEVERTHELESS, A PATTERN OF UNIFORMITIES EXISTS.

UNDERLYING ALL POWER STRUCTURES, IN PART, IS MAN'S FEAR OF SOCIAL DISINTEGRATION -- HIS DREAD OF DRIFTING. IN HIS CRAVING FOR A RELIABLE ORDER, MAN TENDS TO ACCEPT THE POWER PYRAMID STRATIFYING HIS OWN SOCIETY, EVEN THOUGH IT MIGHT RESTRICT HIM PERSONALLY. THROUGH MOST OF HISTORY, MEN HAVE GENERALLY RATIONALIZED THEIR POWER PYRAMIDS IN TERMS OF DEVINE WILL OR NATURAL LAW, AND HAVE GENERALLY ACCEPTED THEIR OWN PERSONAL LOT AS DECREED BY FATE. WOVEN INTO THE FABRIC OF EVERY PYRAMID OF POWER IS A WEB OF MYTHS TO EXPLAIN AND JUSTIFY THE STRUCTURE. THUS, THE MYTH OF THE DIVINE RIGHT OF KINGS, WHICH RATIONALIZED THE OLD ABSOLUTE MONARCHIES OF WESTERN EUROPE, GAVE WAY TO THE MYTH OF THE NATURAL AND INALIENABLE RIGHT OF MEN TO BE GOVERNED BY METHODS OF THEIR OWN CHOOSING.

IN SUMMARY, MAN'S DESIRE FOR SOCIAL ORDER, HIS TENDENCY TO ACCEPT HIS LOT OR POSITION, AND HIS CREATION OF MYTHS TO JUSTIFY THE POWER STRUCTURE UNDERLY ALL POWER STRUCTURES.

WE CANNOT CLASSIFY AND DISCUSS ALL OF THE NUMEROUS TYPES OF POWER PYRAMIDS WHICH HAVE ARISEN IN MAN'S HISTORY. BUT WE CAN DIFFERENTIATE THREE BROAD CATEGORIES WHICH ARE MORE OR LESS BASIC TYPES: THE CASTE, THE OLIGARCHICAL AND THE DEMOCRATIC.

THE FIRST TYPE, THE CASTE PYRAMID, HAS BEEN VERY COMMON IN HISTORY ALTHOUGH IT IS MOST INFREQUENTLY FOUND TODAY. INDIA IS A GOOD EXAMPLE IN THE MODERN WORLD, ALTHOUGH THE INDIAN CASTE SYSTEM IS NOT PURE IN FORM. THIS TYPE OF POWER PYRAMID IS THE SIMPLEST OF THE THREE TO ANALYZE. POWER RELATIONS ARE SHARPLY AND CLEANLY DEFINED. IN IDEAL FORM, THERE IS NO UPWARD SOCIAL MOBILITY, NO LADDER OF STATUS FROM A LOWER TO A HIGHER CASTE, REGARDLESS OF PERSONAL ACHIEVEMENT. THE LOWER THE CASTE, THE LARGER ITS NUMBER OF PEOPLE BELONGING TO IT, AND THE LESS POWER IT POSSESSES IN THE TOTAL POWER STRUCTURE. WHILE THERE MAY BE VARYING STATUSES WITHIN CASTES, ONCE YOU ARE BORN INTO A CASTE, YOUR SOCIAL POWER POSITION IS GIVEN ONCE AND FOR ALL.

THE CASTE SYSTEM IS THE STEEPEST AND MOST RIGID OF ALL POWER PYRAMIDS. THE KING, EMPEROR, HIGH PRIEST OR RAJAH STANDS AT THE TOP, SUPPORTED BY HIS HEREDITARY NOBLES, PRIESTLY HIERARCHY, OR WHATEVER THE CASE MAY BE. THE SECOND HIGHEST CASTE, SHUT OFF BY BIRTH FROM RISING TO THE TOP LEVEL, IS COMPOSED OF MINOR POLITICAL OR RELIGIOUS OFFICIALS AND ADMINISTRATORS. THE THIRD TIER IS THE HUGE BASE OF THE PYRAMID, TYPICALLY MADE UP OF THE GREAT BULK OF THE POPULATION. THIS LOWEST CASTE IS MADE UP MOSTLY OF PEASANTS, WITH A FEW SKILLED ARTISANS AND TRADERS. A FEW PROFESSIONAL GROUPS AND WELL-TO-DO URBAN CRAFTSMEN FORM A THIN LAYER AT THE TOP OF THE CASTE. BENEATH THE WHOLE CASTE SYSTEM ARE THE UNTOUCHABLES, THE CASTELESS ONES -- OFTEN SLAVES -- WHO STAND OUTSIDE THE SYSTEM BUT NEVERTHELESS SUPPORT THE CASTE PYRAMID AT ITS BASE. IN SOME TYPES OF CASTE SYSTEMS, UNDER CERTAIN CONDITIONS, IT IS POSSIBLE FOR SLAVES TO MOVE UP INTO THE LOWEST CASTE BY BECOMING FREE PEASANTS.

THE PURE TYPE OF CASTE PYRAMID HAS BEEN APPROXIMATED IN HISTORY ONLY IN SOCIETIES WITH AN EXTREMELY SIMPLE TECHNOLOGY AND A PRIMITIVE AGRICULTURE AND ECONOMY, WITH WIDELY ILLITERATE AND IMPOVERISHED POPULATIONS. SOME HISTORICAL EXAMPLES CLOSELY RESEMBLING THIS PURE TYPE WERE SEEN IN WESTERN EUROPE IN THE EARLY STAGES OF FEUDALISM AND IN ASIA DURING THE MONGOL AND TARTAR DYNASTIES, SUCH AS THOSE OF GENGHIS KHAN AND TAMERLANE. IN ADDITION TO INDIA, WHICH HAS BEGUN TO BREAK THE CHAINS OF CASTE UNDER THE IMPACT OF INDUSTRIALIZATION, EDUCATION AND DEMOCRATIZATION, THE BEST ILLUSTRATIONS OF THE CASTE POWER STRUCTURE TODAY ARE SAUDI-ARABIA, YEMEN AND A FEW OTHER MONARCHIES AND MINOR SHEIKDOMS IN THE ARAB MIDDLE EAST.

THE SECOND BROAD CLASSIFICATION OF POWER STRUCTURE IS THE OLIGARCHICAL POWER PYRAMID. HERE, TOO, POWER LINES SHARPLY DIVIDE LEVELS AND THE OPPORTUNITY AND POWER BELONGING TO EACH CLASS. BUT A MAJOR DIFFERENCE BETWEEN CASTE AND OLIGARCHICAL PYRAMIDS IS THAT INDIVIDUALS DO HAVE SOME OPPORTUNITY TO RAISE OR IMPROVE THEIR OVERALL SOCIAL STATUS IN THE OLIGARCHICAL SYSTEM. MANY STATUSES ARE ASCRIBED BUT NOT SO MANY AS IN THE CASTE STRUCTURE. THERE IS A WIDER RANGE OF VARIATION WITHIN EACH LEVEL THAN IN A CASTE SYSTEM.

INDUSTRY, TRADE, COMMERCE AND FINANCE ARE MORE HIGHLY DEVELOPED THAN IN A CASTE SYSTEM, MAKING THE MIDDLE CLASS BOTH LARGER AND MORE INFLUENTIAL. JUST ENOUGH SOCIAL MOBILITY IS PERMITTED TO ALLOW A FEW PERSONS IN THE LOWEST CLASS TO RISE TO POSITIONS OF POLITICAL POWER. THERE IS EVEN GREATER MOBILITY FROM THE LOWEST TO THE MIDDLE LEVELS.

ONE OF THE MOST SIGNIFICANT EARMARKS OF AN OLIGARCHY IS THE FACT THAT THE KING, DICTATOR OR ELITE GROUP AT THE TOP OF THE PYRAMID

USES POLITICAL INSTITUTIONS PRIMARILY TO PERPETUATE AND STRENGTHEN HIS OR ITS OWN POWER POSITION. IN THE POST-FEUDAL ABSOLUTE MONARCHIES OF EUROPE, THE INSTITUTIONS AND PROCESSES OF GOVERNMENT PRESERVED THE PRIVILEGES AND SUPREME POWER OF THE RULERS AND MAINTAINED A SOLID LINE OF SEPARATION BETWEEN THE RULERS AND THE MASSES.

THE MODERN FORM OF THE OLIGARCHICAL PYRAMID IS THE TOTALITARIAN DICTATORSHIP, WHERE CLASS POSITION AND POLITICAL POWER ALSO TEND TO COINCIDE. WHILE ROYAL BIRTH STRATIFIED THE ABSOLUTE MONARCHY, PARTY MEMBERSHIP BACKED BY SHEER POLICE AND MILITARY STRENGTH RETAINS SUPREME POWER IN A DICTATORSHIP. IN THE FOUNDING OF CONTEMPORARY TOTALITARIAN STRUCTURES -- FASCIST ITALY, NAZI GERMANY AND SOVIET RUSSIA-- ALL EXISTING SOCIAL AND CULTURAL ORGANIZATIONS WERE STRIPPED TO THEIR CORE AND REBUILT AS TOOLS OF THE PARTY. THERE CAN BE NO STATUS, NO PROPERTY, NO DIFFUSION OF POWER CENTERS WHICH ARE NOT HARNESSED TO THE POLITICAL STRUCTURE, BY AND FOR THE PARTY.

THE RULING CLIQUE IN THE SOVIET UNION TODAY CONSISTS OF ELEVEN MEN -- THE OLIGARCHS, AS IT WERE -- WHO COLLECTIVELY CONSTITUTE THE PRESIDIUM OF THE PARTY'S CENTRAL COMMITTEE. THESE SAME MEN HOLD TOP GOVERNMENT POSTS ALSO, SO THAT THEY RESEMBLE AN INTERLOCKING DIRECTORATE ASTRIDE BOTH GOVERNMENT AND PARTY HIERARCHIES. THE MIDDLE RANKS OF THE TOTALITARIAN OLIGARCHICAL STRUCTURE ARE FILLED WITH THE SMALL MINORITY OF THE TOTAL POPULATION WHICH IS ADMITTED TO THE PARTY -- THREE AND ONE HALF PERCENT IN THE SOVIET UNION TODAY, ALTHOUGH IN SOME CASES A PERSON CAN RISE BY PERSONAL ACHIEVEMENT WITHOUT PARTY MEMBERSHIP, IT IS GENERALLY TRUE THAT THE GREAT MAJORITY OF KEY POSITIONS IN ALL SECTORS OF SOVIET

SOCIETY ARE MANNED BY CAREFULLY SELECTED, THOROUGHLY TRAINED AND DISCIPLINED PARTY MEMBERS.

DESPITE ITS VERBAL GESTURES TOWARD THE MYTHS, INSTITUTIONS AND PROCESSES OF DEMOCRACY, THE MODERN OLIGARCHICAL DICTATORSHIP IS NOT RESTRAINED BY LAW OR CONSTITUTIONALISM. THE ONLY REAL CHECK ON THE OLIGARCHY IS ITS OWN SENSE OF SELF-RESTRAINT DICTATED BY THE EXPEDIENCY OF THE MOMENT. LENIN EXPRESSED THIS WHEN HE SAID, "LAW IS POLITICS," ADMITTING THAT FORMAL LAW SHOULD NEVER BE ALLOWED TO STAND IN THE WAY OF THE NEEDS OF THE STATE –– AS THE OLIGARCHY SEES THESE NEEDS, OF COURSE.

ONE DISADVANTAGE OF THE MODERN DICTATORSHIP INVOLVES THE LINE OF SUCCESSION TO THE SEAT OF SUPREME POWER WHEN THE OLD DICTATOR AND HIS ASSOCIATES DIE. THE PASSING DICTATOR, NO MATTER HOW POWERFUL, SEEMS UNABLE TO HAND THE MANTLE OF POWER TO SOME INDIVIDUAL OF HIS OWN CHOOSING. LENIN MADE IT PLAIN BEFORE HE DIED IN 1924 THAT STALIN WAS NOT TO HIS LIKING AND HE ADVISED THE PARTY TO FIND SOME WAY OF PREVENTING STALIN FROM ASSUMING SUPREME POWER. BUT STALIN DID ASSUME SUPREME POWER BY PLAYING OFF FACTIONS WITHIN THE PARTY ELITE, AND ULTIMATELY DISPOSING OF ALL OF THEM. WHEN STALIN DIED IN 1953, HE TRIED TO PASS HIS LEADERSHIP ON TO GEORGI MALENKOV. AGAIN THE ATTEMPT FAILED. MALENKOV LASTED ONLY SIX MONTHS AS HEAD OF THE PARTY AND LESS THAN TWO YEARS AS HEAD OF THE GOVERNMENT.

THE THIRD TYPE OF POWER STRUCTURE, THE DEMOCRATIC POWER PYRAMID, IS THE MOST FLUID, HETEROGENEOUS, AND CHANGEABLE OF THE THREE. THE MAIN LINES OF POWER ARE SUBJECT TO CONSTANT EBB AND FLOW AS PEOPLE MOVE UP AND DOWN THE SOCIAL LADDER. IN GENERAL, CLASS POSITION AND POLITICAL POWER DO NOT AUTOMATICALLY COINCIDE. BUT THIS IS NOT TO SAY

THAT CLASS STATUS AND POLITICAL POWER ARE ENTIRELY UNRELATED. IT IS MUCH EASIER FOR UPWARDLY MOBILE PERSONS TO ENTER CERTAIN AREAS OF POWER THAN OTHERS. BUT THERE IS NO FIXED, UNALTERABLE HEREDITARY SOCIAL DISTINCTIONS WHICH ARE CARRIED OVER INTO THE POLITICAL SPHERE. ANYONE, WITH THE RIGHT COMBINATION OF CIRCUMSTANCES, CAN CLIMB TO THE PEAK OF THE PYRAMID. MOREOVER, THE LOWER SOCIAL ORDERS IN A DEMOCRATIC POWER STRUCTURE TEND TO HAVE GREATER PROPORTIONS OF WEALTH AND POWER IN THEIR HANDS THAN IS TRUE OF THE BOTTOM RUNGS OF THE CAST OR OLIGARCHICAL LADDERS. FOR OCCUPATIONAL PURPOSES AT LEAST, ACHIEVEMENT IS MORE IMPORTANT THAN ASCRIBED STATUS.

PERHAPS THE BEST SINGLE TEST OF WHETHER A DEMOCRATIC POWER PYRAMID REALLY EXISTS OR NOT IS TO SEEK AN ANSWER TO THIS QUESTION: IS ANY ONE CLASS POWERFUL ENOUGH TO CONTROL OR USE THE POWER OF GOVERNMENT ESSENTIALLY FOR ITS OWN ADVANTAGE? IF THE ANSWER IS "NO," THEN A DEMOCRATIC STRUCTURE PROBABLY EXISTS. ONE CONDITION, HOWEVER, IS THAT THE PEOPLE MUST BE THE FINAL JUDGES OF POLITICAL POWER RATHER THAN ANY SPECIALLY PRIVILEGED GROUP.

LET US NOT ASSUME, HOWEVER, THAT THE PEOPLE, EVEN IN A DEMOCRATIC POWER STRUCTURE, ACTUALLY DO THE GOVERNING. IN ALL POWER STRUCTURES, A RELATIVELY FEW PERSONS GOVERN. A SMALL NUMBER OF PEOPLE IN ANY POWER STRUCTURE DO THE WORK OF ADMINISTERING AND MAKING OTHER GOVERNMENTAL PROCESSES WORK. THE IMPORTANT THING IS THE RELATIONSHIP WHICH EXISTS BETWEEN THE GOVERNORS AND THE GOVERNED. THIS IS THE REAL KEY TO THE FUNDAMENTAL DIFFERENCES BETWEEN POWER STRUCTURES. PROPER GOVERNMENTAL AUTHORITY AND EXERCISE OF POWER IN A DEMOCRACY ARE LIMITED. THE FINAL JUDGES OF THE LIMITS ARE THE PEOPLE.

WHEN POLITICAL SCIENTISTS SPEAK OF DEMOCRATIC PYRAMIDS, THEY ARE NOT THINKING OF A PARTICULAR FORMAL GOVERNMENT STRUCTURE. A DEMOCRATIC PYRAMID CAN EXIST UNDER VARYING CONDITIONS. IT CAN EXIST IN A STATE WITH A UNITARY FORM OF GOVERNMENT AS WELL AS IN ONE WITH A FEDERAL TYPE OF POWER DISTRIBUTION. THERE IS NO CONNECTION WHATEVER BETWEEN DEMOCRACY AS SUCH AND FEDERALISM AS SUCH. NOR DOES DEMOCRACY NECESSARILY INVOLVE THE SEPARATION OF POWERS BETWEEN THE LEGISLATIVE, EXECUTIVE AND JUDICIAL BRANCHES OF GOVERNMENT. DEMOCRACY CAN EXIST IN BOTH THE PRESIDENTIAL AND THE PARLIAMENTARY SYSTEMS. IT IS EVEN POSSIBLE FOR CERTAIN TYPES OF MONARCHIES TO HAVE FUNDAMENTALLY DEMOCRATIC PYRAMIDS, AS IN GREAT BRITAIN. THE REAL POLITICAL POWER IN ENGLAND LIES WITH THE HOUSE OF COMMONS AND THE CABINET, AS LIMITED BY PUBLIC OPINION AND PERIODIC ELECTIONS.

THE IMPORTANT THING IS THAT ALL DEMOCRACIES MUST HAVE LIMITED GOVERNMENTS, MEANING THAT THEY ARE RESTRICTED IN PRACTICE BY LAW AND CUSTOM.

THE MERE FACT THAT A STATE HAS A CONSTITUTION DOES NOT NECESSARILY MEAN THAT A DEMOCRATIC PYRAMID EXISTS. SOME OF THE MOST EXTREME TOTALITARIAN DICTATORSHIPS HAVE THE MOST HIGH SOUNDING CONSTITUTIONS. IT SHOULD BE ENOUGH TO SAY THAT THE SOVIET UNION IS A FEDERAL STATE AND HAS ONE OF THE MOST IMPRESSIVE CONSTITUTIONS IN THE WORLD. DEMOCRATIC POWER PYRAMIDS OPERATE ONLY WITHIN A PROPER, LEGITIMATE AREA; THEIR POWERS AND FUNCTIONS ARE LIMITED IN FACT; AND THE GOVERNMENT SHARES TOTAL SOCIAL POWER WITH OTHER INSTITUTIONS IN SOCIETY.

POWER IS REALITY, WHILE AUTHORITY MAY BE LITTLE MORE THAN A FORMAL FICTION. GOVERNMENTS ARE WHAT THEY DO, NOT WHAT THEY PREACH.

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APPENDIX B
TEST FORM FOR IMMEDIATE POSTTEST

BASIC COLLEGE

Social Science 233

Political Power and Power Structures

INSTRUCTIONS

We'd like your quick reactions to some words and phrases. On the following pages, you will find a word or a phrase followed by a series of seven step rating scales. Each scale is composed of opposite meaning adjectives and presented in this fashion:

happy___:___:___:___:___:___:___ unhappy

Let's say the word you are asked to judge is NEWSPAPERS:

If you feel that NEWSPAPERS are very closely related with one end of the scale, you should place your checkmark in one of the extreme positions, as follows:

happy_X_:___:___:___:___:___:___unhappy

If you feel that the word is quite closely related to one side, as opposed to the other, then you should check as follows on one of the spaces one step in from the extreme:

mild___:___:___:___:___:_X_:___harsh

If the word seems only slightly related to one side as opposed to the other, then you should check one of the spaces on either side of the middle space:

hard___:___:___:___:_X_:___:___soft

If you consider both sides of the scale equally associated with the word, or if the scale is completely irrelevant, then you should place your checkmark in the middle space:

red___:___:___:_X_:___:___:___green

REMEMBER:

1. Work fast. Do not worry or puzzle over items. Give first reactions.
2. Be sure you check every scale--do not skip any.
3. Put only one mark on any scale. Put your check-mark in the middle of spaces, not on the boundaries.

TEACHING OVER TELEVISION

good____:____:____:____:____:____:____bad

interesting____:____:____:____:____:____:____dull

unfair____:____:____:____:____:____:____fair

pleasant____:____:____:____:____:____:____unpleasant

active____:____:____:____:____:____:____passive

small____:____:____:____:____:____:____large

strong____:____:____:____:____:____:____weak

slow____:____:____:____:____:____:____fast

valuable____:____:____:____:____:____:____worthless

clear____:____:____:____:____:____:____hazy

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

FACE-TO-FACE TEACHING

good____:____:____:____:____:____:____bad

interesting____:____:____:____:____:____:____dull

unfair____:____:____:____:____:____:____fair

pleasant____:____:____:____:____:____:____unpleasant

active____:____:____:____:____:____:____passive

small____:____:____:____:____:____:____large

strong____:____:____:____:____:____:____weak

slow____:____:____:____:____:____:____fast

valuable____:____:____:____:____:____:____worthless

clear____:____:____:____:____:____:____hazy

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

CASTE POWER PYRAMID

kind ___:___:___:___:___:___:___ cruel

fast ___:___:___:___:___:___:___ slow

bad ___:___:___:___:___:___:___ good

valuable ___:___:___:___:___:___:___ worthless

active ___:___:___:___:___:___:___ passive

fair ___:___:___:___:___:___:___ unfair

pleasant ___:___:___:___:___:___:___ unpleasant

weak ___:___:___:___:___:___:___ strong

large ___:___:___:___:___:___:___ small

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

AUTHORITY

kind ____:____:____:____:____:____:____ cruel

fast ____:____:____:____:____:____:____ slow

bad ____:____:____:____:____:____:____ good

valuable ____:____:____:____:____:____:____ worthless

active ____:____:____:____:____:____:____ passive

fair ____:____:____:____:____:____:____ unfair

pleasant ____:____:____:____:____:____:____ unpleasant

weak ____:____:____:____:____:____:____ strong

large ____:____:____:____:____:____:____ small

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

POWER POLITICS

kind ___:___:___:___:___:___:___ cruel

fast ___:___:___:___:___:___:___ slow

bad ___:___:___:___:___:___:___ good

valuable ___:___:___:___:___:___:___ worthless

active ___:___:___:___:___:___:___ passive

fair ___:___:___:___:___:___:___ unfair

pleasant ___:___:___:___:___:___:___ unpleasant

weak ___:___:___:___:___:___:___ strong

large ___:___:___:___:___:___:___ small

Have you skipped any scales

TURN PAGE AND CONTINUE WORKING

OLIGARCHICAL POWER PYRAMID

kind ___:___:___:___:___:___:___ cruel

fast ___:___:___:___:___:___:___ slow

bad ___:___:___:___:___:___:___ good

valuable ___:___:___:___:___:___:___ worthless

active ___:___:___:___:___:___:___ passive

fair ___:___:___:___:___:___:___ unfair

pleasant ___:___:___:___:___:___:___ unpleasant

weak ___:___:___:___:___:___:___ strong

large ___:___:___:___:___:___:___ small

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

DEMOCRATIC POWER PYRAMID

kind ____:____:____:____:____:____:____ cruel

fast ____:____:____:____:____:____:____ slow

bad ____:____:____:____:____:____:____ good

valuable ____:____:____:____:____:____:____ worthless

active ____:____:____:____:____:____:____ passive

fair ____:____:____:____:____:____:____ unfair

pleasant ____:____:____:____:____:____:____ unpleasant

weak ____:____:____:____:____:____:____ strong

large ____:____:____:____:____:____:____ small

Have you skipped any scales?

TURN PAGE AND CONTINUE WORKING

CIRCLE THE LETTER OF THE BEST ALTERNATIVE FOR EACH QUESTION:

1. Power always means the:

   a. application of force

   b. capacity to control behavior

   c. restriction of social mobility

   d. formal right to control others

2. One of the best illustrations of the caste power structure today is:

   a. Saudi-Arabia

   b. Indonesia

   c. Thailand

   d. Viet Nam

3. Totalitarian dictatorships are beset with the practical problem of:

   a. using power without exceeding the legal system

   b. limiting the status and property of party members

   c. denying upward mobility to the lower classes

   d: establishing procedures for succession to power

4. The use of organized force on the whole society is a course of action open to a:

   a. democratic type power pyramid

   b. oligarchical type power pyramid

   c. caste type power pyramid

   d. all of the above

   e. none of the above

TURN PAGE AND CONTINUE WORKING

5. When studying various societies, one finds that power relationships show:

a. a pattern of uniformities

b. unpredictable variation

c. a tendency toward disintegration

d. the intentions of various pressure groups

6. The wielders of power can be spotted in power pyramids by a study of:

a. the structure of authority

b. the constitutional provisions

c. the network of social relationships

d. the personalities and characteristics of those in authority

7. One can usually say that in all types of power pyramids:

a. those without power accept the power situation

b. those who have authority have ultimate power

c. those with power originated in a certain class or caste

d. all of the above

8. In contrast to a caste system, the oligarchical power pyramid has:

a. a smaller but more competent middle class

b. more differences within each social level

c. one-man rather than a group at the top level

d. more differences between social levels

TURN PAGE AND CONTINUE WORKING

9. A characteristic of totalitarian dictatorships is that:

a. there is no legal provision for the separation of powers

b. class lines are rigidly defined

c. a written constitution is usually absent

d. party membership and social status tend to coincide

10. Authority always involves:

a. the ultimate use of force

b. the right to lead or guide

c. the possession of power

d. all of the above

11. In all types of power structures:

a. a relatively few persons govern

b. high social status and authority closely coincide

c. economic factors determine power distribution

d. all of the above

e. none of the above

12. All democratic power structures have:

a. a symbolic focus of unity in a person

b. a federal form of government

c. power relations sharply defined

d. limited governments

TURN PAGE AND CONTINUE WORKING

13. What is the relationship between power and authority in a society?

    a. they always coincide

    b. authority has official rights but power does not

    c. authority and power both have official rights

    d. authority controls power

14. Power pyramids appear in all societies because men everywhere

    a. fear social disorder

    b. tend to accept the prevailing myths of status

    c. learn to justify the existing power structure

    d. all of the above

    e. none of the above

15. In a caste power pyramid, one's power position is usually determined by:

    a. marriage

    b. occupation

    c. age

    d. family

    e. none of the above

TURN PAGE AND CONTINUE WORKING

* Please fill in the following information:

1. Your name ______________________________
(print)

2. Your student number ______________________

3. Your 233 section number ____________________

4. Did you have Social Science 231 by television?

(check one) ______ (yes) ______ (no)

5. Did you have Social Science 232 by television?

(check one) ______ (yes) ______ (no)

6. What is your estimate on the number of hours a week you watch television:

a. While on campus attending MSU? ______ hours a week

b. While at home during vacations? ______ hours a week

Have you skipped any pages?

Have you skipped any questions?

APPENDIX C
INFORMATION SHEET FOR DELAYED POSTTEST

About six weeks ago, you received a lecture on "Political Power and Power Structures." We are interested in how much you retained of this talk.

Fill in the following blanks before you start--

YOUR NAME ______________________________
(PRINT)

YOUR STUDENT NUMBER ________________

YOUR SECTION NUMBER ____________________

** The talk was given to you by a guest lecturer. What was his name?

(Check only one)

Professor Brookover ______

Professor Kenney ________

Professor Smucker ________

Professor Berg ___________

Professor Redemsky ________

Professor Hall ____________

Professor Angel ___________

Don't know _______________

** What was he introduced as? (Check one)

Nationally known expert ___________

Social Science Dept. Expert ________

I don't recall ___________________

Answer all items--do not skip any.

TURN THE PAGE AND START WORKING

APPENDIX D

INSTRUCTIONS FOR EXPERIMENTAL CLASSES

1. The experiment on "Power and Power Structures" will be held April 12, 15, and 16. The attached sheet gives the schedule of experimental classes.

2. It is necessary that all classes involved in this experiment have not had the section on power and power pyramids at the time of the experiment.

3. The talk will be about 25 minutes long followed by a short quiz.

4. Dittoed notices will be distributed to each instructor concerned for distribution to students. These are to be distributed to the class session before the lecture is to take place.

5. We will want each instructor to be present even though his class is listening to the guest lecturer.

6. Each instructor will administer the tests. We will have a monitor in each of the classes concerned but better rapport is probably established by the instructor administering the test rather than a stranger.

7. There will be three conditions of "expertness" under which the lecture will be given. There will be two modes of presentation--face-to-face and closed circuit TV. No class will receive more than one treatment. One of the expertness conditions is the lecturer talking to one of his own sections. In the second, the dittoed announcement and verbal introduction by the instructor will make the guest lecturer the Social Science Department expert on the subject. The third condition will introduce the lecturer as a national expert on the subject.

APPENDIX E

Instructions for Monitors for TV experiment

1. You will be sitting in on the experimental lectures both on TV and in the face-to-face situation. Be unobtrusive but report all untoward happenings back to this office.

2. Bring enough copies (about 55) of the right form of the examination. You may give these to the instructor whose class is being used or you may keep them until the instructor announces the test.

3. Time the speech. Put in minutes here____________________

4. You will have a copy of the script for checking purposes.

NOTE HERE:

Any radical departures from the script____________________

Difficulty in hearing instructor____________________

Disturbances during speech. What and when____________________

5. Did the instructor give the right introduction of the guest lecturer?________________

6. Any other comments:

7. Pick up examinations and bring them back to the office. Note time required for examination by students____________minutes.

APPENDIX F

INTRODUCTION FOR "MEDIUM" EXPERT

For tomorrow's class meeting, we will have a guest lecturer, Professor _______ of our staff. He will give the lecture on "Political Power and Power Structures."

Professor _______ is the expert in the Social Science Department on this subject.

Be prompt. There will be a short quiz after the lecture.

INTRODUCTION FOR "NATIONAL" EXPERT

For tomorrow's class, we will have a guest lecturer, Professor_______ of our staff. He will give the lecture on "Political Power and Power Structures."

Professor_______ has attained a national reputation among learned groups for his expertness in this subject. He is the author of a book about political power. He has been called upon by political leaders and government officials as a consultant.

Be prompt. There will be a short quiz after the lecture.

SPECIAL INSTRUCTION FOR INTRODUCTIONS OF GUEST LECTURERS

You will receive a dittoed form to be passed out to each student on the day before the experimental session is to take place.

After handing the memo out to the students, please read the instructions aloud to the students.

At the end of the period, remind the students again of the lecture coming up--name of lecturer and switch in classrooms, if movement to Giltner is necessary.

On the day of the guest lecture--repeat the introduction from the previous day. Put his name on the blackboard. The introduction should follow this form:

As was announced at the last class meeting, we are going to hear a talk on "Political Power and Power Structures." Our lecturer is Professor (X, Y, or Z). He is (departmental expert or national expert--state his qualifications as printed on the dittoed memo).

APPENDIX G

List of Visuals for Advertising Experiment

No.	Subject	Visuals
1	Introduction and history	Two books: Whittier and Young Historical examples: photographs and drawings in books and pamphlets Kinds of advertising today: 16 proofs on cards
2	How the business is organized; job opps.	Film: The Magic Key (#1688-2) Blackboard
3	Economic and social aspects of advertising	Blackboard
4	Purposes of advertising	Proofs on cards
5	Research I (Markets)	Book: Overstreet AMI proofs Pillsbury proofs Blackboard
6	Research II (copy)	Proofs Research reports
7	Research III (Questionnaires)	Uncle Ben's Rice box and ads
8	Copy I (General)	Blackboard and proofs
9	Copy II (Headlines)	Blackboard and proofs
10	Copy III (Body Text)	Proofs Englander Assignment: photographs Blackboard
11	Copy IV (News in copy)	Proofs
12	Copy V (Slogans, TMs)	Film strip (Coca-Cola)
13	Layouts I	Frank Young book Proofs Stick men and faces
14	Layouts II	Proofs Eye camera pix
15	Layouts III (production); Review	Proofs Progressive proofs Type samples and type books

16	Mid-term Exam	None
17	Media I (Magazine)	Blackboard SR & DS -- Magazines Post, Life, Successful, Business, Trade
18	Media II (Newspapers)	Blackboard 7-column newspaper Tabloid newspaper SR & DS -- Newspapers Ayer's Directory Comics Supplements
19	Media III (Outdoor)	Blackboard Miniature
20	Media IV (Business, Industrial, Influence Groups)	Mags. Proofs: Case Study; International-Drott
21	Media V (Direct Mail)	20-25 Direct Mail Pieces IH Distributor Kit
	Wrap-Up	IH Red Book
22	Radio-TV I (Programming)	Blackboard
23	Radio-TV II (Time-buying)	Coverage maps
24	Radio-TV III (Production)	Blackboard; Burnett directions
25	Radio-TV IV (Commercials)	Flow charts; story boards; scripts Film; Burnett, K & E
26	Marketing Plan (elements)	Blackboard
27	Marketing Plan (elements)	Blackboard
28	Marketing Plan (complete)	Marlboro package and dealer broadside
29	Complete campaigns	Shell proofs -- Blatz proofs
30	Review	
31	Final Examination	

APPENDIX H

JOURNALISM 305 QUESTIONNAIRE

We are asking you to fill out a very short questionnaire. The items on this questionnaire are presented in this form:

ELVIS PRESLEY

wiggly ____:____:____:____:____:____:____ non-wiggly
3 2 1 0 -1 -2 -3
ought to be drafted____:____:____:____:____:____:____ ought to be deferred

In the above example, if you feel that Elvis Presley is *extremely* wiggly, you should check the space above 3. If you think he is *quite* wiggly, you would check the space above 2. If you think he is *slightly* wiggly, you would check the space above 1. On the other hand, if you think Ekvis is *extremely* non-wiggly, check the space above 2 and if you think he is *slightly* non-wiggly, check the space above 1.

If you think that Elvis is *neither* wiggly or non-wiggly, or if you think that these adjectives *do not apply*, check the 0 or neutral position.

Similarly with the second pair: if you think that Elvis ought to be drafted very strongly, check the extreme position; if you feel quite sure that he ought to be drafted, check the next space in, and so on.

* DO NOT SKIP ANY SCALES

* DO NOT PUT MORE THAN ONE CHECK MARK ON A LINE.

Please be frank in your answers.

____________________ Your Name

____________________ Your Section Number

__________ Your Age

Have you had a previous *course* by *television*? _____ Yes _____ No

If your answer was *yes*, when did you take it? ________________(example: Fall, 52)

What was the name and number of the course?________________________

TURN THE PAGE AND START WORKING

TEACHING BY TELEVISION

Good ___:___:___:___:___:___:___ Bad
3 2 1 0 -1 -2 -3

Passive ___:___:___:___:___:___:___ Active

Clear ___:___:___:___:___:___:___ Hazy

Personal ___:___:___:___:___:___:___ Impersonal

Hard to take notes ___:___:___:___:___:___:___ Easy to take notes

Boring ___:___:___:___:___:___:___ Interesting

Easy to learn ___:___:___:___:___:___:___ Difficult to learn

A CAREER FOR ME IN ADVERTISING

Attractive ___:___:___:___:___:___:___ Unattractive
3 2 1 0 -1 -2 -3

Bad ___:___:___:___:___:___:___ Good

Fast advancement ___:___:___:___:___:___:___ Slow advancement

Low prestige ___:___:___:___:___:___:___ High prestige

Passive ___:___:___:___:___:___:___ Active

Approve ___:___:___:___:___:___:___ Disapprove

Unlimited openings ___:___:___:___:___:___:___ Limited openings

THE ADVERTISING PROFESSION

Ethical ___:___:___:___:___:___:___ Unethical
3 2 1 0 -1 -2 -3

Low paying ___:___:___:___:___:___:___ High paying

Unfair ___:___:___:___:___:___:___ Fair

Necessary ___:___:___:___:___:___:___ Unnecessary

Weak ___:___:___:___:___:___:___ Strong

Good ___:___:___:___:___:___:___ Bad